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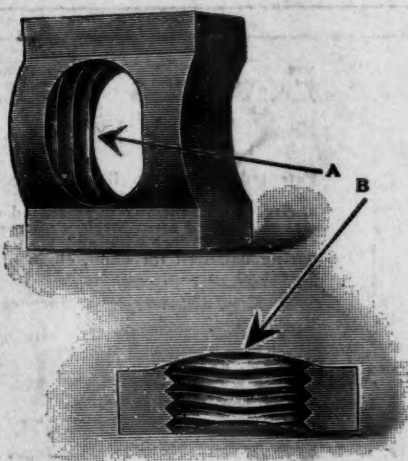
Railway Age

FIRST HALF OF 1919—No. 7

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SIXTY-FOURTH YEAR

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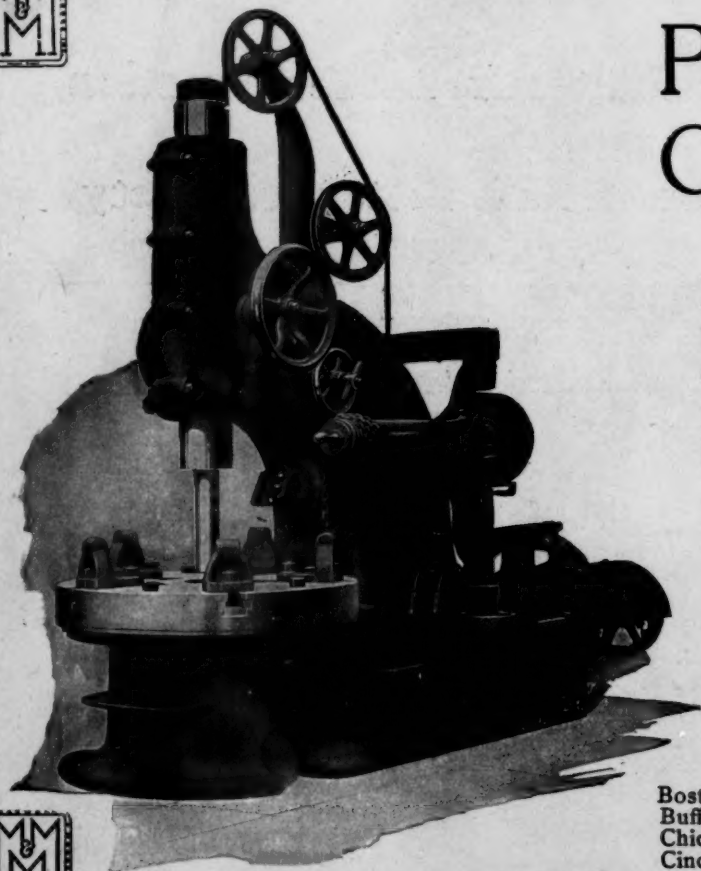
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EDITORIAL

Railway Age

Since incorporation, the Southern Railway has been financed under the auspices of J. P. Morgan & Company. The

Morgan and the Southern Railway

company's stock had been held in a voting trust until June 30, 1914, and Morgan & Company were the dominant factors in this voting trust. Last week, however, when the Southern Railway sold \$25,000,000 notes to refund notes which fall due March 1, the underwriting was done by a Chicago syndicate, headed by Halsey, Stuart & Company. Morgan & Company gave out a short statement to the effect that the Chicago syndicate did it with their (Morgan's) blessing. The notes were offered to the public at 99¼, and run three years at 6 per cent, making the interest yield slightly over 6¼ per cent to the investor. Everybody knows that there is no love lost between John Skelton Williams, controller of the currency, and the National City Bank, the National City Company and Morgan & Company. Probably Mr. Williams was only too glad to see someone go in and underbid Morgan & Company for Southern Railway financing. Now comes the test, however, as to whether or not these notes can be sold at the price at which Halsey, Stuart & Company have to offer them to make any profit on the bid which they made to the railway company. If any set of bankers, either in New York or in the west, are misjudging the bond market and are unduly pessimistic as to the price at which railroad securities can be sold, it is for the public good that someone else should have the courage of his convictions and prove the more pessimistic bankers wrong. The sale, sometime ago, of \$50,000,000 bonds by the Pennsylvania, through Kuhn, Loeb & Company, was eminently successful. If this sale of Southern Railway notes should prove anything like the same sort of success, it would be a most encouraging sign for the railway situation in general.

As pointed out in an article on the activities of our railway forces in France, published elsewhere in this issue, the

An Army Practice Applied to the Railroads

military organization of our transportation corps has necessitated the maintenance of a personnel bureau the duty of which is to keep a careful record of the education, experience and performance of every enlisted man and officer in the service. Those who have had experience under this plan are convinced of its value in helping discover weaknesses in the organization and in making possible the ready application of remedial measures. The question has arisen in the minds of some of our railway officers in France whether the personnel bureau scheme could not be profitably adopted by the railroads of this country. Under existing conditions here it is too often the case that, while weaknesses become evident, they are not traced to their sources. Under the method used in France the discovery of inefficiency in any department has led to a careful examination of the individual records of officers and employees in that branch to see if the source of the trouble could not be found. In this connection it is pointed out that the work of the personnel bureau might be vitiated if it were subordinated to any one railroad department. The independence of its activities is essential to its success, and accordingly it is proposed that the bureau be

directly under the authority of the chief executive—federal manager, general manager or president, as the case may be. The objection may be raised, and perhaps not without reason, that it will be difficult to establish successfully any fair method of rating the work of railroad men. Many of their activities are not sufficiently tangible to render unnecessary the exercise of a wide range of discretion on the part of supervisory officers. Certainly, however, the desirability of the establishment of personnel bureaus is well worth considering.

While several of the monthly reports of freight traffic movement and car performance issued by the Operating Statistics

Freight Traffic Statistics for 1918

Section of the Railroad Administration have shown gains in efficiency, the report covering the full calendar year 1918 does not make an especially strong showing for government control as compared with that of the year before. While the volume of traffic as measured by net ton miles of freight handled shows an increase of 1.8 per cent and the net ton miles per mile of road per day increased from 5121 to 5210, the report also shows that this was done with an average increase of 2.9 per cent in freight cars on line. While car efficiency has been increased by heavier loading, credit for which must be shared with the shippers and the Food Administration, the full gain in this item is not reflected in the train loading figures and the average mileage per car per day fell below the record for 1917. While the tonnage per car was increased from 27 to 29.1 or 7.8 per cent, the increase in the average tonnage per train was increased only from 653 to 682, or 4.4 per cent. The miles per car per day fell off from 26.1 to 24.9, or 4.6 per cent, and the net ton miles per car day decreased from 495 to 490, a reduction of 1 per cent. The increase of 1.8 per cent in net ton miles was handled with a reduction of 2.5 per cent in train miles and of 2.1 per cent in car miles, but the decrease of 5.6 per cent in loaded car miles was to a considerable extent offset by an increase in the empty car mileage of 6.1 per cent, the percentage of loaded to total car miles having been reduced from 70.2 to 67.7. The percentage of unserviceable cars also shows a slight increase, from 5.6 per cent in 1917 to 5.7 in 1918. While the railroad system under federal control has handled a slightly larger traffic in 1918 than was handled in 1917, at an increase in expenses of \$1,200,000,000, the report of the Operating Statistics Section shows that the principal aspect of increased efficiency was in heavier car loading and to a lesser extent in the train leading.

By paragraph five of General Order No. 8, issued February 21, 1918, which reads: "No discrimination will be made in

Abolition of Piecework

the employment, retention or conditions of employment of employees because of membership or nonmembership in labor organizations." Director General McAdoo opened the door for labor unions to enter the railway field on all sides and to thoroughly develop and perfect their organizations. This has been done. By supplement No. 4 to General Order No. 27, issued in midsummer, he tended to discourage the railway

employees from working piecework by granting a material increase in the hourly wage, with no adjustments in the piecework rate. The difference between the piecework rate and the hourly wage was so great that only those of exceptional ability and agility could, with the unadjusted piecework rate, earn more than was paid under the hourly rate. Those who could not compete with the increased hourly rate naturally saw the futility of exerting themselves for no monetary gain and their output accordingly declined. There were, however, quite a few who still were able by their diligence and skilfulness to earn sufficiently more than the increased hourly rate to make piecework attractive to them. To make the victory for the hourly rate complete Director General McAdoo on December 31 issued instructions that the question of whether or not the piecework system should be abolished entirely be put to a vote of the employees themselves and that the railroads under government control be governed by the will of "a substantial majority." The returns are nearly complete. With the men now so thoroughly organized and with such a small number of employees able to make piecework pay under the discriminatory rates, there is but one answer. Efficiency and output have been sacrificed to further what organized labor believes to be to its interest, whereas, the truth is, the complete abolition of piecework will result in a decline of efficiency which will be harmful to all concerned and most of all to labor itself.

Don't Lose Your Punch

"WHAT'S THE USE; what's the use." This is the drone-like murmur that can be heard on approaching any government-run institution. This attitude is a slow poison and an ambitious man might as well acquire a drug habit as to surrender himself to its deadening embrace. Since the signing of the armistice railroad men have been exposed to this poisonous influence in a doubly dangerous way. Added to the dulling influence that accompanies all bureaucratic regimes, there is the added uncertainty, for the railroad man, in regard to his future employer. There is only one way to overcome this, and that is to fight, and fight hard against it. Fall back on your self-respect, refuse to let petty injustices weigh on your mind, stand out for what you know to be right!

This applies all down the line; to the mechanical and engineering departments as well as to the operating department. If the mechanical department is being supplied with "standardized material" which is uneconomical and does not give satisfactory service, the foreman and the master mechanic should bring this fact forcibly to the attention of superior officers. The same is true in the engineering department as regards supervisors and division engineers. In the operating department if materials or conditions are unsatisfactory and uneconomical, complaint must be made to higher officers. The true state of affairs can only become known to federal managers, regional directors and the central administration by each officer down the line vigorously and fearlessly protesting against conditions which, in his judgment, are wrong.

Surely, the American railroad man is not going to lose his punch because of a touch of government operation and a temporary combination of adverse circumstances. The master mechanic, the division engineer, the trainmaster and superintendent are having a hard row to hoe, but it is no harder and not as deep and broad as that which the federal manager has to hoe; and it is the falsest sort of philosophy to give up to a feeling of "What's the use." If conditions are wrong, each man has got to put his shoulder to the wheel to right them, and it is helping neither the federal manager nor the central administration to refrain from protesting against materials or conditions which are uneconomical and unsatisfactory.

Early Action Regarding the Railways Needed

TWO RAILWAY PROBLEMS confront the country. One is the problem of the ultimate disposition of the railroads. This cannot be solved during the present session of Congress. The other is the problem presented by the policy of drastic retrenchment which is now being followed, and which if persisted in will have a very bad effect upon the industry and workers of the nation during the period of transition from a war to a peace basis. This problem can and should be solved almost immediately. The policy of retrenchment being carried out applies not only to additions and betterments, which would require capital expenditures, but also to maintenance and renewals, which would be chargeable mainly to operation.

With the reduction of traffic and earnings which has occurred and is still continuing, the Railroad Administration is justified in effecting every economy which will not unduly impair the service rendered or cause deterioration of the physical properties or prevent making up deferred maintenance.

It is plain that the railroads are overmanned in many departments. The public should not be compelled to pay in the form of rates or taxes the wages of men or the cost of materials which are not needed. But both the present and the future welfare of the public demands that all the men shall be employed, and all the materials shall be bought and used that are needed to offset deferred maintenance and to put the properties in condition to handle not only present, but future business.

The Railroad Administration is not following a policy of rigorous retrenchment because it really desires to. It is following it mainly because the government, as an operator of railways, is practically bankrupt. The revolving fund of \$500,000,000 which was provided by Congress last year is almost exhausted, and the railways are not earning enough and operating income to pay the guarantees of standard return to the companies. In consequence, the Railroad Administration is getting into sore need of funds. With its deficit rapidly growing, it cannot carry out an adequate program of maintenance, much less an adequate program of additions and betterments, unless and until Congress provides it more money. Director General Hines has asked for a new revolving fund of \$750,000,000. This will be needed whether government operation is continued or the railways are returned to private operation. The legislation necessary to provide it should be passed at the present session of Congress. It is difficult to see how, unless this is done, the policy of retrenchment in maintenance can be discontinued until Congress meets again.

If the policy of retrenchment is continued unabated it will have serious effects, not only upon the railroads, but upon other industries. The *Railway Age* in its issue of February 7, page 337, published letters from twenty-seven railway supply concerns clearly indicating what will be the effects upon the railway supply industry unless the Railroad Administration soon begins to place larger orders. A continuance of the present policy means calamity to the railway supply industry and its employees. Furthermore, the railway supply industry is so large and extends so widely over the country that if it is compelled to close its plants and discharge its men, the effects will be felt by concerns and their employees in almost every other line of industry. Congress should not adjourn without providing a new revolving fund for the Railroad Administration, and the sooner this is done, the better it will be for the entire nation.

With respect to additions and betterments, which require capital expenditures these cannot be made without concerted action by the Railroad Administration and the companies that own the railways. While the future of the rail-

ways is so completely undetermined, neither the Railroad Administration nor the companies will be disposed to enter upon large projects for extensions and permanent improvements. Congress cannot at its present session pass legislation finally to settle the railroad question. The time is too short. It will soon have before it, however, enough data, arguments and plans to reach as complete and constructive a solution as it would have if it continued to consider the subject for five years, or even for ten years. This being the case, the legislation needed for a permanent solution could and should be passed during the present year. That is, it could be if an early special session of the next Congress should be called soon after the adjournment of the present Congress. Therefore, the course which should be taken by the government in dealing with the present railway situation is clear.

First, the present Congress should promptly pass legislation providing the Railroad Administration with a new and adequate revolving fund.

Second, the new Congress should be called together in extra sessions soon after March 4, and should as speedily as practicable draft and adopt the legislation which is clearly needed and which the nation obviously wants, providing for the early return of the railways to the management of their owners under conditions which will render it practicable for the companies to operate their properties efficiently and economically, and to enter immediately upon a program of additions and betterments which will tend to equip the railways satisfactorily to handle the commerce of the country when business again becomes normal.

Every citizen, every business concern, every commercial organization, that is anxious to promote the public welfare, both during the present period of transition and during the period of great opportunity for American business which will follow it, should urge upon the Administration and Congress the need for action along these lines.

Enormous Increase in Expenses

THE STATISTICS of railway earnings and expenses for December 1918, as reported by the Interstate Commerce Commission, show that the downward trend of railway net operating income continued through that month. As pointed out by the *Railway Age* in an editorial in its issue for January 24, page 236, net operating per month income steadily declined from \$128,000,000 in August to \$57,000,000 in November. In December, for 175 large roads, it was only \$23,000,000.

The bad showing in December was due almost entirely to an increase of operating expenses. In December, 1917, the weather and other operating conditions were as bad as were ever known, and yet the operating expenses of the railways included in the Commission's report were only \$238,582,000. In December, 1918, the weather conditions were as favorable to economical operation as were ever known, and yet the expenses were over \$375,282,000, making an increase over December, 1917, of \$136,700,000.

Undoubtedly this enormous increase in expenses was partly due to the fact that large retroactive advances in wages were charged into the December accounts. On the other hand, there are still large wage advances to be made to the train service employees and the Railroad Administration is not making adequate expenditures for maintenance which would be chargeable to operating expenses. The December figures alone would indicate that operating expenses are increasing at the rate of over \$1,600,000,000 a year. It is to be feared that when all necessary adjustments in the accounts are made, and advances in wages now pending are granted, it will be found that for handling a corresponding amount of traffic, operating expenses are running at the rate of \$1,500,000,000 a year more than those of 1917.

The statistics for December are accompanied by statistics showing the results of the same roads for the twelve months of 1918. The 175 large roads included, having a mileage of 214,000 miles, had an increase in earnings during the entire year of \$824,000,000, or 21.6 per cent; an increase in expenses of \$1,090,000,000, or 40 per cent; and a reduction of operating income of \$265,000,000, or almost 30 per cent. Of the increase in total earnings, over \$600,000,000 must have been due to advances in rates. Without the advances in rates the Railroad Administration would have had a deficit at the end of the year exceeding three quarters of a billion dollars.

In spite of the enormous increase in expenses, officials of the Railroad Administration continue to point out economies which have been effected. These economies are real, but most of them cannot be permanent. For example, R. H. Aishton estimates the economies he has effected during the year, first as director of the Western Region and later of the Northwestern Region, at \$34,000,000. It is a notable fact, however, that Mr. Aishton's statistics show that over \$23,000,000 of these economies were effected by reductions of passenger train service, most of which cannot be continued permanently.

On the whole, the available statistics indicate that the present system of government operation of the railways would have proved enormously more expensive than private operation, even in the absence of any advances in wages.

A Billion Dollar "Germ"

A. B. GARRETSON, president of the Order of Railway Conductors, testifying on behalf of 14 railroad labor organizations, claiming to represent 1,900,000 employees, told the Senate committee that the three other brotherhood executives and many of the heads of the other organizations had been opposed to government ownership on principle all their lives, but had been converted by the experience of the past year under government operation of the railroads. He said that government operation had not had a fair trial as to its efficiency during its first year but that the employees had seen in it the "germ" of what might be made of it after a fair trial. Therefore the representatives of the 14 organizations had unqualifiedly endorsed the plan proposed last week on behalf of the brotherhoods by their counsel, Glenn E. Plumb, which has been characterized as a plan for "government ownership and brotherhood operation."

The particular aspect of government operation during the past year which has been most visible to the employees has been the increases in wages awarded them by Mr. McAdoo, which are now estimated at between \$800,000,000 and \$900,000,000 a year and which will be increased by possibly \$60,000,000 to \$100,000,000 by the latest demands of the brotherhoods. If this is merely the "germ," the future possibilities looming up in the minds of the leaders of the brotherhoods and of the ten other organizations affiliated with the American Federation of Labor with whom they have joined forces must be rather interesting. Some of the roots and branches which might be developed from such a germ were described in the statement presented before the committee last week by Mr. Plumb. He proposed that the government buy the railroads by issuing its bonds in exchange for the outstanding securities, furnish all the working capital, and turn the operation over to a corporation administered by a board of directors, one-third to be chosen by the classified employees, one-third by the President of the United States—presumably by and with the advice and consent of the brotherhoods and the American Federation of Labor—and one-third by the appointed officers. After the plan got under way the officers would be appointed by this board of directors and no remarkable gift of vision is required to discern another germ in this part of the scheme.

Mr. Garretson spoke of furnishing transportation not for profit but at cost, but he said that no effort had been made to settle on all the details of the plan. Mr. Plumb's plan contemplated profits, to be divided one-half to the government and one-half to the employees in the form of a wage dividend. With the employees electing and assisting to elect the directors, who would appoint the officers, we can readily see how Mr. Garretson's ideal of transportation without profits might be attained, but Mr. Plumb presents a sample array of figures from which, by assuming an operating ratio of 70 per cent, he produced a profit, after payment of fixed charges, of \$500,000,000 to be divided equally between the government, which would furnish all the capital, and the employees, who would have been paid their wages. This would leave \$250,000,000 for a wage dividend, which, divided among 2,000,000 employees, would give an average of \$125 to each.

After the precedents set by Mr. McAdoo in the way of two or three increases in a year with back pay we fear that Mr. Plumb's assumed figures are too modest to satisfy his clients, but as a germ the idea has great possibilities.

New Books

Proceedings of the International Railway Fuel Association, edited by J. G. Crawford, secretary, 200 pages. Illustrated, 6 in. by 9 in. Bound in leather. Published by the association, 702 East Fifty-first street, Chicago. Price, \$1.50.

The convention of the International Railway Fuel Association held in Chicago in May, 1918, was a notable event. The association met at a time when the fuel situation was most serious and the addresses delivered at the convention represent the ideas of some of the most distinguished men who were called on to deal with that problem during the war. These addresses are published in full in the proceedings of the association which have just been issued. There is hardly a phase of the railroad fuel problem that is not covered. The viewpoint of the miner is presented by John P. White. The mine operators are represented by Harry N. Taylor. The work of the Fuel Administration is outlined by P. B. Noyes and M. L. ReQua; of the Railroad Administration by R. H. Aishton, Eugene Auliffe, F. McManamy, E. H. DeGroot and W. S. Carter. There are also addresses by the president of the association, E. W. Pratt, Robert Quayle, Thomas Britt and several returned soldiers.

Modern Management Applied to Construction, by Daniel J. Hauer, consulting engineer. 6 in. by 9 in., 194 pages, illustrated. Bound in cloth. Published by McGraw-Hill Book Company, Inc., 239 W. 39th Street, New York City. Price, \$2.50.

This is a new book on scientific management and, whereas most of the previous treatments of this subject have referred primarily to manufacturing and building construction, this book treats the subject from the standpoint of the construction contractor handling grading work, building bridge masonry, etc. The subject is handled in a style that is entertaining, primarily because of the frequent use of examples and hypothetical conversations. This has been applied most aptly in the initial chapter defining scientific management, and the one following on the old versus the new management. The author's justification for the application of scientific management is covered in a chapter entitled "Finances and Efficiency." In handling the subject from the standpoint of the construction contractor, it is divided under the separate heads of plant design, motion study, modern management, cost keeping and bookkeeping, organization, and the effect upon the workmen. The final chapter deals with the organizations of the large war construction projects.

Letters to the Editor

A Suggestion for a Seniority Index

PORTSMOUTH, Ohio.

TO THE EDITOR:

When employees' records are kept and used in connection with the promotion of employees on a seniority or service basis, a numerical index often takes considerable burden off the office and makes the work more pleasant and easier.

By assigning a certain number to each employee immediately on entering the service, each successive employee being assigned the next higher number, an automatic seniority index will be obtained for daily use in the assigning or placing of employees in proper positions according to their respective seniority, and for use in other ways as may be necessary.

For the information of the employees themselves the usual seniority list arranged in date order showing the names of employees should be kept, each employee should be informed of his service number and he should use it in turning his reports into the office when bidding for a new position.

In this way one employee will only be burdened with one number (or seniority record) instead of one employee burdened with all seniority records, making for greater accuracy and speed to the benefit of all concerned.

The necessary care should be exercised to see that a correct number is assigned in the first place, and that no change is made in numbers after once assigned, unless there is an absolute necessity therefor.

The lower number would of course indicate the man longest in the service. If a class of promotion made it necessary to distinguish that service with some mark, in order to avoid changing any employee's number, a letter may be affixed or prefixed to the number, a certain letter indicating a certain class of service, and so on.

As employees leave the service for any cause their numbers then become obsolete as far as the working seniority list is concerned and these numbers should not be assigned to any other employee again, but should be retained to cover the employee to whom first assigned, or discarded entirely.

In order to keep the number record accurate at all times, a small book should be used, showing names of employees consecutively in the order employed, with the number assigned at the time of employment, which will indicate at all times what number is assigned to any certain employee, and what is the next number to be assigned. The alphabetical index which is already used in most offices, should, of course, carry opposite the employee's name his assigned number. These two records are easily kept and assure correctness of assignment.

I believe that this method will be found to be a great convenience and a time saver. It should prove of special value in view of the fact that recent awards of the Railroad Administration to various classes of railroad employees gives to each class a seniority standing, and many positions will no doubt be hereafter filled more or less on that basis. The numerical index provides a ready and accurate reference in determining the relative standing of one or any number of employees. If it is desired to designate numbers from one central office to cover several subdivisions, the addition of a letter prefix or suffix will admit of that without change or confusion, and permit the use of only one series of numbers—that is, commencing with number 1, or any desired number, and progress in consecutive order indefinitely. PAUL JONES.

Further Light on Work of Railway Men in the War

Transportation Corps Shows Marked Adaptability in Solving Problems Under Strange Conditions

TOURS, France, January 5, 1919.

NOTHING HAS CONTRIBUTED MORE to the success of the transportation efforts of the American forces in France than the adaptability of the officers and men in charge of this work. In a strange country, unfamiliar with the language, on a railway system utilizing operating methods foreign to their experience, the Americans handled a rapidly increasing flow of troop and freight traffic with such evident efficiency that they won the unqualified praise of the French with whom their activities were co-ordinated. Whether engaged exclusively in the movement of American trains, or assisting the French either by bolstering up their weakened railway organizations or by operating lines in the danger zone near the front, the transportation officers and men from the United States proved ready and able to meet every emergency which confronted them.

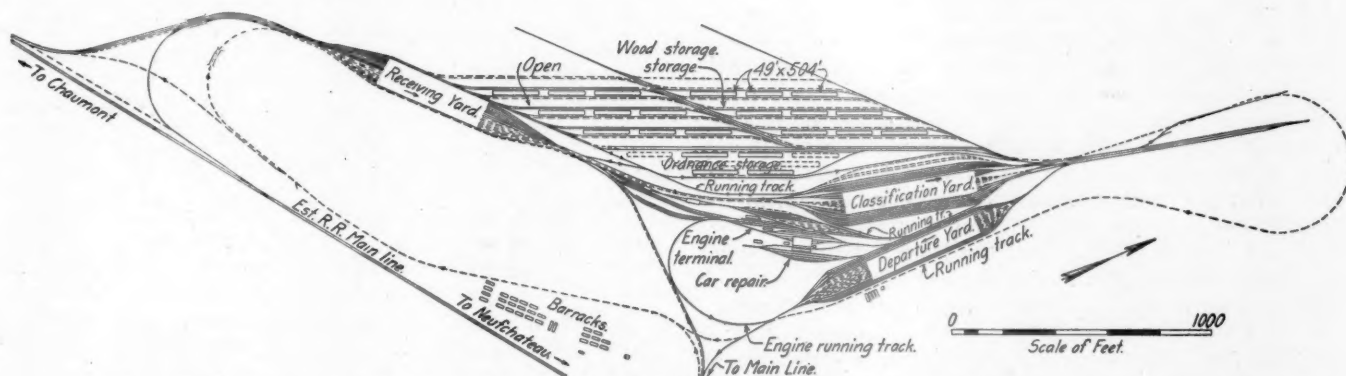
Contrary to the general impression that the railway forces constituted one unit of the American Army, they formed three classes: (1) those who operate on the railways of France independently of the existing French organizations; (2) those who were merged with the French transportation forces and became substantially French employees, and (3) those regiments which operated lines close to the fight-

of railway men, in the Transportation Corps commanded by Gen. W. W. Atterbury. This article pertains wholly to the work of the first two classes of railroad forces, and not to the third just mentioned.

The Housing of Railway Troops

It is not generally known in the United States that the American railway troops, while engaged in work similar to that in which they were employed in civilian life, nevertheless are subject to the same discipline and the same living conditions as the other army contingents. All railway men work in uniform, live in barracks—most of which were built by themselves—and are organized according to the military plan, with various ranks ranging from general down to private. Each railroad employee has been provided with a special design of cap with a visor, similar in appearance to the headgear of automobile chauffeurs, and also with a 21-jewel Hamilton watch.

The problem of providing these men with sanitary and properly equipped barracks, and with food and water, as well as with adequate medical care, has been by no means simple, especially in view of the fact that the railway offi-



Regulating Station at Liffol Le Grande. Full Lines Show Portion of Yard Completed on November 15

ing front under the direction of the French military authorities. The first class constitutes a complete railroad organization superimposed upon and co-ordinated with the French organizations which operate trains over the same lines. The second class was a contribution to the French railway personnel which was seriously depleted by the drain of the war upon the man power of the railroads of France. In this connection, it is interesting to note that bitter experience taught the French, as well as the English, the folly of permitting their transportation organizations to be crippled by the loss of officers and employees drafted into military service. Tardy efforts were made to recall these men to their civilian occupations and, while a considerable number were returned to service, the initial loss was by no means made up.

The third class of American railway forces consists of regiments which first arrived in France and were employed in operating trains from regulating stations to light railways close to the front. There were three of these units out of the first nine regiments organized in the United States, which worked under the direction of the French military authorities. While these contingents remained a part of the American army, they were not, like the other two classes

of railway men, in the Transportation Corps commanded by Gen. W. W. Atterbury. They were confronted always with the difficulty of anticipating assignments of men to new locations sufficiently in advance to provide suitable living quarters.

The Personnel Bureau

Another duty imposed upon those in charge of the railway forces by army regulations was the maintenance of a personnel bureau. This organization keeps a careful record of every man in the service, which includes information concerning his education, a detailed statement of all the positions he ever held, his military rank and the promotions he has received, if any, and also a rating of the quality of his work. Equally careful records of the officers are maintained, each of which is given a quarterly standing according to his efficiency, intelligence, leadership and general value to the service. The distinct advantage of this classification is that it makes the source of weaknesses in the organization evident by an examination of the records and therefore greatly facilitates the intelligent application of corrective measures. Though all railway troops were organized into military units and were given various ranks according to that scheme of organization, it does not always happen that one's

military grade conforms to his importance as a railway man. Sometimes, for instance, an engineman would be a private while the fireman on the same train would have the rank of sergeant. Irregularities of this kind, however, did not interfere with the conduct of the work of the transportation troops.

The Work of the Railway Troops

The American Expeditionary Forces first loaned railway men to the French operating organizations in the middle of April, 1918. About May 1, 1918, the American railway organization commenced the operation of its own trains over the French roads under trackage rights. Some idea can be gained concerning the relative number of men in the two services from recent statistics regarding the distribution of engine and trainmen under the general manager of the Service of Supply of the Transportation Corps. While the engine and trainmen operating in exclusively American service numbered 4,531, those engaged in French service numbered 2,222.

Because of the difference between French and American operating methods no officers or men have been permitted to engage in actual railway work until they have received a course of instruction from French railway officers, who have grounded them thoroughly in roundhouse and shop practice, train rules, the signal systems, etc. No man was discharged from this course of instruction without passing a successful examination and receiving a certificate as evidence that he has done so.

When the Americans first began to operate trains they used French and Belgian locomotives and both French and American cars. Later, when the American locomotives arrived, some were loaned to the French and the others were utilized by the Americans to take care of existing needs. This mixing of equipment continued up to the time of the signing of the armistice, and while American cars were equipped with air brakes, it was not until late in the fall that it was possible to make up trains entirely of American cars and thereby make full use of the air brake system. This circumstance was due to a large extent to the fact that the French railroads were continuously confronted with a serious shortage of cars and it was necessary to avoid any waste movements of equipment. In fact, at times it was necessary to cover open cars with tarpaulins and thereby put them into service ordinarily performed by box cars. The readers of the *Railway Age* have previously been advised that the French had no car record system until a car record bureau was established by the American railway organization. To facilitate car tracing, the French turned over to the Americans a number of wires, which the signal corps of our forces adapted to our needs. At first telephone service was established for this purpose, but later telegraph lines were opened and utilized.

When the Americans commenced the operation of their own trains they were assigned certain stalls in French roundhouses for the use of their locomotives. Later, however, the Americans erected their own engine houses, generally, at other locations. The difference in the sites of the engine terminals was determined by the difference in the length of the engine runs of the two operating organizations. In general, two American engine runs equaled three French runs.

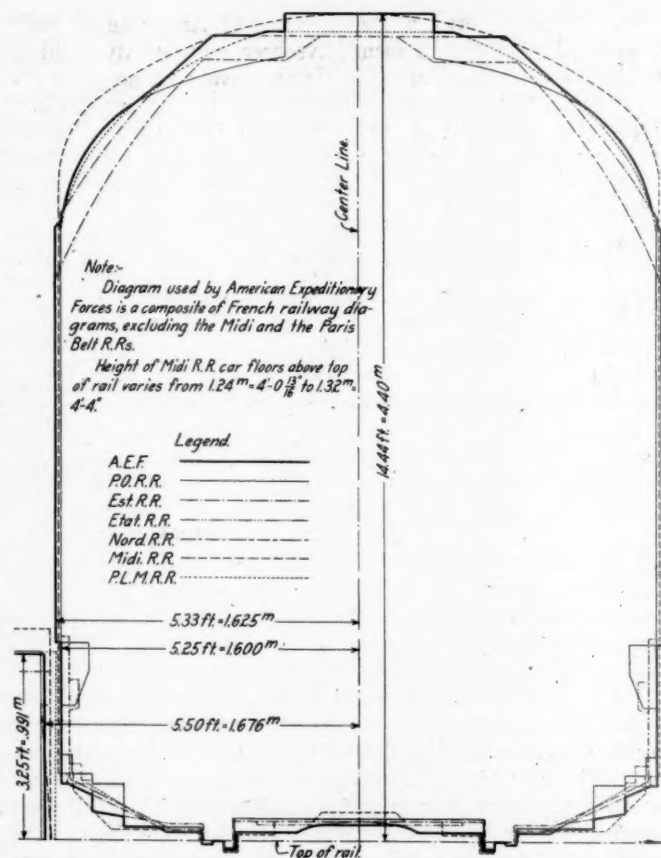
As has been previously pointed out in the *Railway Age*, the Americans conform with the French operating methods. In the absence of a train despatching system in France, the chef de gare, or station agent, controls the operation of trains. With him is associated a Railroad Transport Officer representing the American forces, who looks after the interests of our army. As the tonnage on French rails increased, the operating difficulties under this scheme became more evident, at least from our point of view. Trains were moved in what the French term "marches." This plan calls for the departure of trains so many minutes apart according to the

volume of traffic. If a train fails to leave at the scheduled time of departure, it is not permitted to move until it is assigned to another marche.

To assist the American forces in their work under these strange conditions, the officers of the American organization prepared a book of rules adaptable to all French lines, which was corrected and approved by French railway officers. Left-hand operation, which is the rule on French roads, did not simplify the problem of adaptation to French methods.

Handling American Traffic

The transportation burden assumed by the American railway forces became increasingly great with the progress of the war. The American supplies received at the ports in February, 1918, totalled 192,239 short tons, while those handled in November aggregated 921,972 tons, or an increase of 379 per cent. In all cases possible the traffic received from vessels has been moved from the docks to ad-



Composite Diagram of Clearances of American and French Equipment

jacent storage points or other available storage facilities on the railways serving the ports. Under war conditions military officers determined the priority in the movement of supplies from these bases, in accordance with which traffic was worked up into solid train lots and moved to regulating stations, where the jurisdiction of the Service of Supply of the Transportation Corps ended. At these stations a regulating officer reclassified the freight received, with other supplies stored there, and it was taken by military trains to the light railways at the front.

American trains had equal rights with French trains on all lines, the priority of one train over another depending entirely on military necessities. A few recent statistics regarding the movements on different parts of the lines operated by the Americans are indicative of the volume of American traffic at the conclusion of the war. Between Saumur

and Tours, a distance of 39 miles, the average daily eastbound movement was 23 American supply trains, 27 French trains and one American troop train. The tonnage rating of American engines in this stretch was 2,400. Between Coutras and Perigueux, a distance of 47 miles, on a line serving the Gironde river group of ports, the eastbound movement consisted of 20 American supply trains daily, one American troop and 14 French trains. The tonnage rating of American engines between these points was 1,500. Between Pont Vert and St. Germain du Puy, a 7-mile line which has been aptly characterized "the neck of the bottle" because it connects roads from most of the ports with lines which led to the front, there was a daily eastbound movement of 36 American supply trains, 5 American troop trains and 38 French trains. The tonnage rating on American engines from Pont Vert to Bourges, 3 miles, was 1,570, and from Bourges to St. Germain du Puy, 4 miles, it was 3,000.

The Relations Between the French and American Railway Men

The relations between the French and American railway troops, both officers and men, have been consistently cordial. On the whole, the American railway private is more intelligent than his brother of the trenches and has been exceedingly industrious and cheerful under the exacting demands of army discipline and the onerous duties which he was called upon to perform. The French are free to admit that our railway men work faster than theirs, but at the same time state that they are more careless. It is a fact that at one point while the French turned an average of 65 engines a day, that record was increased by the Americans to 140 engines daily. It may be fairly said that the French are more thorough in their work but are less resourceful and less inclined to deviate from long standing and traditional practices. On the other hand, it is admitted by American railway officers that American operation did increase the number of railway accidents as compared with the number experienced under French operation.

While the French equipment at first seemed ludicrously light as compared with American rolling stock, observation and study of conditions in France has added strength to the conviction that small equipment is best suited to the transportation needs of France. In general, traffic is handled in smaller quantities than in the United States, and the average haul is considerably below that of American roads. Light equipment has the further advantage of making possible an ingenious method of switching which is in practice in French yards. When it is desired to set out a car from a freight train, the car is moved to a small turntable located in the main track, uncoupled from the cars to which it is attached, turned at right angles and moved by electric power to a turntable on a parallel track, where it is turned and moved to the desired point on that track.

Although American railroad men were disposed at first to disparage French equipment, they are unanimous in their commendation of the condition of French roadbeds. They are built more substantially than American roads, are ballasted with rock and provided with excellent drainage. It might have been anticipated that the heavy American locomotives and cars would play havoc with the French lines which were constructed for much lighter equipment. On the other hand, however, the French lines stood the test very well, and showed no signs of wear under the strain, except to a small extent during the rainy season of the past autumn.

Maintenance of way in France was entirely in the hands of the French except in yards used by Americans. This was due to the fact that the French had large numbers of German prisoners, and some civilians, available for manual labor, and also to the military difficulty of assigning to this work small American contingents, which could not be uti-

lized except under the supervision of commissioned officers and after being provided with suitable living quarters in advance. In yards used by the Americans, however, all maintenance work was done by American troops, ranging from roadmasters down to section men.

The experience of the American railway men in France has proved an education both for them and the French forces with whom they were associated. The mutual respect of the transportation forces of both countries for the methods and practices of the other was very materially increased.

It is safe to predict that in the future American railroad supply manufacturers will receive a more ready hearing in France than formerly, and will be able to market their products without conforming to specifications with mathematical exactitude. In fact, it is probable that American devices in a modified form will find their way to the French market in increasing numbers.

Sailing Day Plan Applied to Company Freight*

By H. E. Ray

General Storekeeper, Atchison, Topeka & Santa Fe.

THERE HAS BEEN MUCH interest in the plan of handling commercial freight on certain sailing days; that is, instead of shipping every day to local points a certain sailing or shipping date for that particular point would be adhered to, with the result that straight carloads would be made rather than mixed carloads of less than full tonnage.

As a matter of fact, it is just as applicable, if not more so, to the handling of company freight. No doubt most storekeepers, particularly those employed on larger roads, have made it a practice of handling supplies for their various division stores on certain days, shipping to each point possibly once a week, by holding up the various items for a particular store until the sailing date arrived, at which time a full carload for that particular point has probably accumulated. It has been found that handling company freight in such a manner has enabled the main or general store to utilize the full capacity of the cars to a much better advantage than if it attempted to ship daily to all stores.

I have found from personal experience that it pays to have a man on the general store platform, whose sole duty it is to look after the cars as they come in, line them up for unloading, see that they are properly switched and properly reloaded. Under his direction the materials going out to division stores are so combined that they can be forwarded with the least expenditure of car service; his duties also include checking the unloading, which enables him to so speed up this feature that the resultant delay to the car is only a legitimate one. Such a man will earn his salary many times over in avoiding delays to equipment and in seeing to it that such cars as are loaded are filled to their capacity.

At large central stores the problem of properly utilizing and consequently conserving freight cars is not so difficult as it is at the smaller stores where on account of the relatively small amount of business it is sometimes difficult to combine daily business so as to utilize the cars properly. It is at the division stores that a great deal of our future work will have to be done if we reach the full measure of success in this important feature. The division storekeeper is very prone to utilize a car for a comparatively small amount of material simply to get it off his hands.

*From a paper entitled, Conservation of Freight Cars, presented before the Railway Storekeepers' Association at Chicago, January 28.

The Standard Heavy Santa Fe Type Locomotive

Heaviest Single Unit Freight Locomotive Among the Designs of the Railroad Administration

THE FIRST LOCOMOTIVE of the Railroad Administration's standard heavy 2-10-2 type was recently completed at the Brooks Works of the American Locomotive Company. This locomotive was designed on the basis of driving axle loads of 60,000 lb. and has a total weight on drivers of 293,000 lb. The total weight of the locomotive in working order is 380,000 lb. and it is capable of exerting a calculated maximum tractive effort of 74,000 lb.

The design of this locomotive possesses no unusual

feature included among the Railroad Administration's standards it is of interest to compare it with a number of other heavy locomotives of the same type. By an inspection of the table it will be seen that it can by no means be ranked

A COMPARISON OF HEAVY 2-10-2 TYPE LOCOMOTIVES

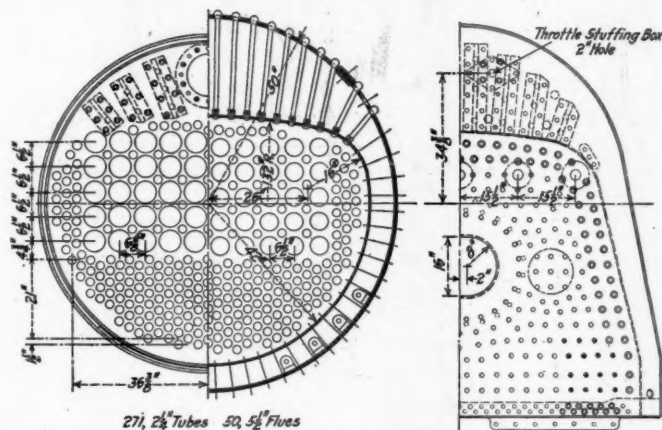
Road	U.S. Std.	Pa. Lines	D. & R. G.	Erie	N. Y. O.
Year Built	1918	1918	1916	1916	1916
Tractive effort, lb.....	74,000	80,900	81,200	83,000	71,200
Total weight, lb.....	380,000	435,400	428,500	401,000	353,500
Weight on drivers, lb.....	293,000	351,300	337,500	335,500	298,500
Diameter of drivers, in.....	63	62	63	63	57
Cylinder diameter and stroke in.	30x32	30x32	31x32	31x32	28x32
Steam pressure, lb., per sq. in.	190	205	195	200	190
Heating surface, total evap., sq. ft.	5,156	4,725	5,369	4,959	4,498
Heating surface, equivalent*, sq. ft.	7,001	7,152	7,362	6,870	6,009
Grate area, sq. ft.....	88.2	80.0	88.0	94.8	80.2
Tractive effort x diam. drivers ÷ equiv. heating surface*..	665.9	701.7	695.0	760.0	677.0
Firebox heating surface ÷ equiv. heating surface, *per cent	6.3	5.2	5.0	5.0	5.4
Grate area ÷ volume cylinders	3.3	3.1	3.2	3.4	3.5

*Equivalent heating surface—total evaporative heating surface + 1.5 times the superheating surface.

among the heaviest or most powerful 2-10-2 locomotives which have been built, although there have probably been none of better balanced design from the standpoint of boiler capacity.

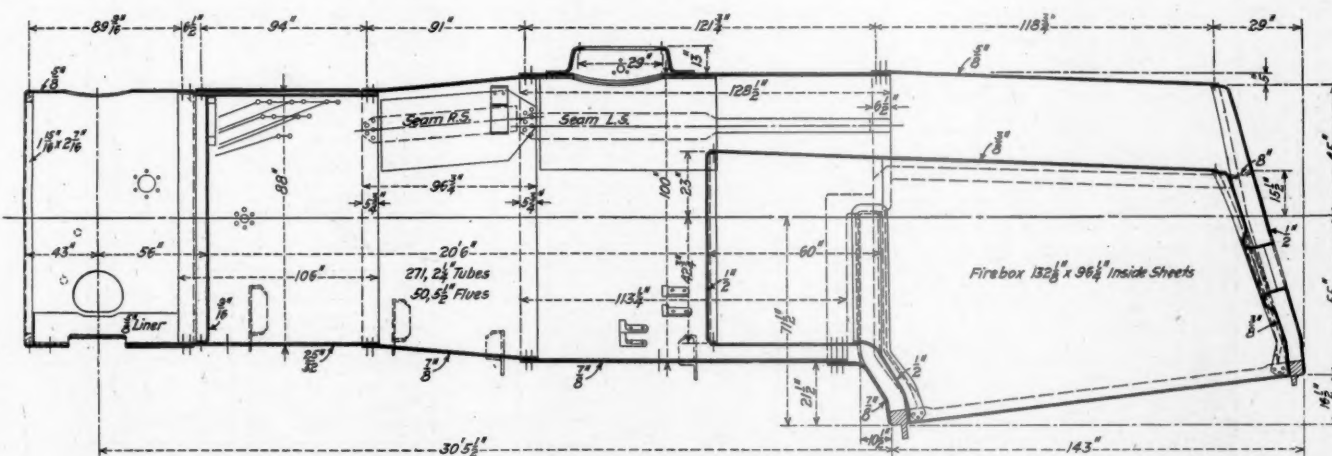
The boiler barrel is of the telescopic type, with an outside diameter at the first course of 88 in., increasing to a maximum diameter of 100 in. There are three courses, the middle one of which is conical; the third course is 113 1/4 in. in length and is long enough to carry the dome ahead of the combustion chamber.

The firebox includes a barrel combustion chamber, the tube sheet of which is 60 in. ahead of the throat sheet, thus providing for tubes 20 ft. 6 in. in length. The firebox is fitted with a brick arch carried on five tubes and is fired by a Hanna mechanical stoker. Other equipment includes



Back Boiler Head, Front Tube Sheet and Section Through the Combustion Chamber

features, the type of details throughout being similar to those used in the construction of other standard locomotives which already have been described, interchangeability of parts between the various types having been effected wherever



The Boiler of the Standard Heavy 2-10-2 Type Locomotive

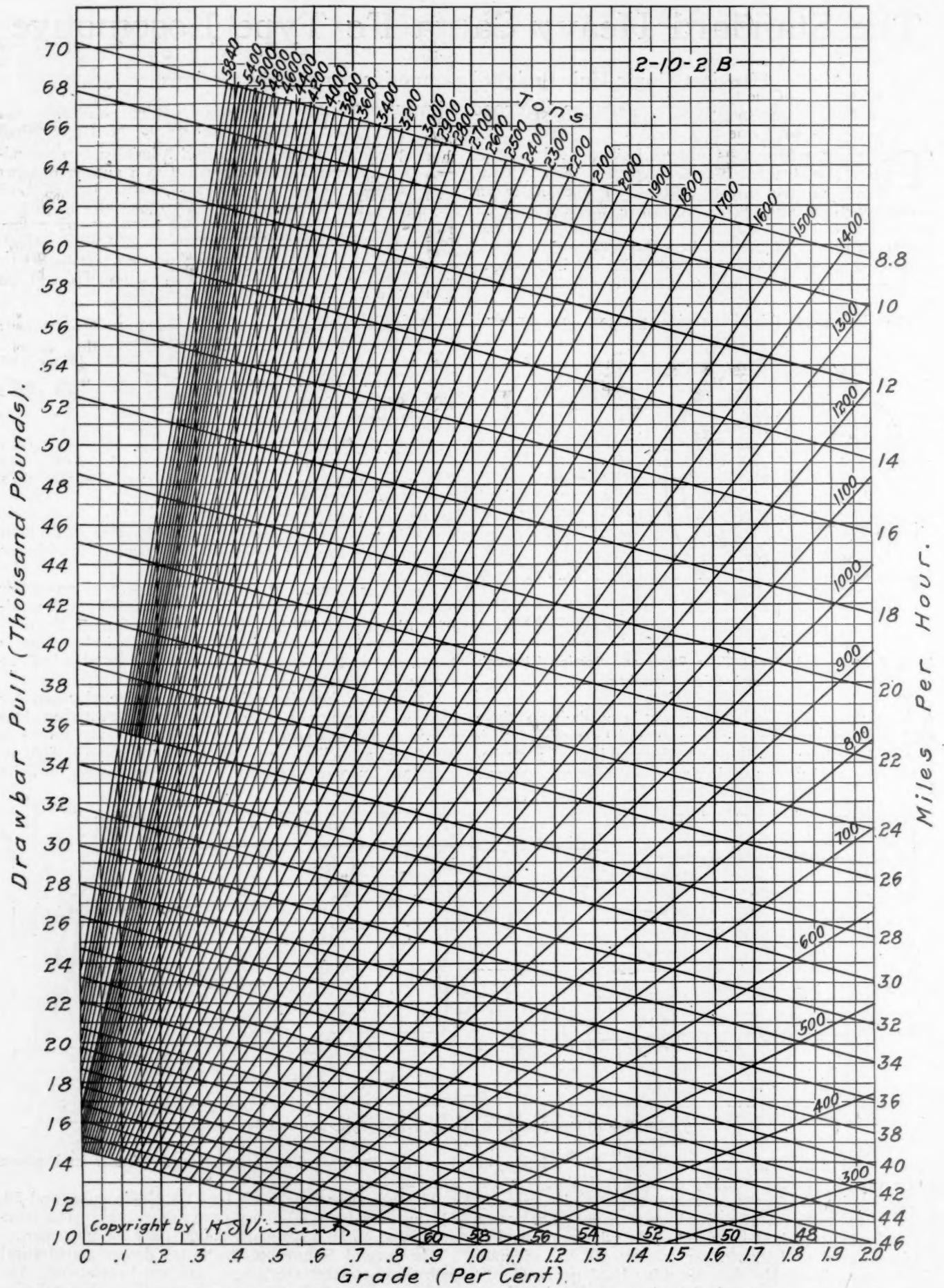
stresses and dimensions would permit. The relation of boiler capacity to the cylinder demand, calculated in accordance with Cole's ratios, shows ample boiler capacity both as to heating surface and grate area. The steam generating capacity is 104 per cent of the cylinder demand at a piston speed of 1,000 ft. per minute; the size of grate also shows up favorably, the ratio being 102.3 per cent.

As this is the heaviest single unit type of freight loco-

Franklin Railway Supply Company's firedoor and power grate shaker.

The tube sheet is laid out for 271, 2 1/4-in. tubes and 50, 5 1/2-in. flues for a 50-unit type A superheater. The tubes are spaced 3/4 in. apart while the flues are one inch apart.

The general features of the frame design are identical with those of other single unit standard locomotives. The cylinders are carried on a single front rail cast integral with

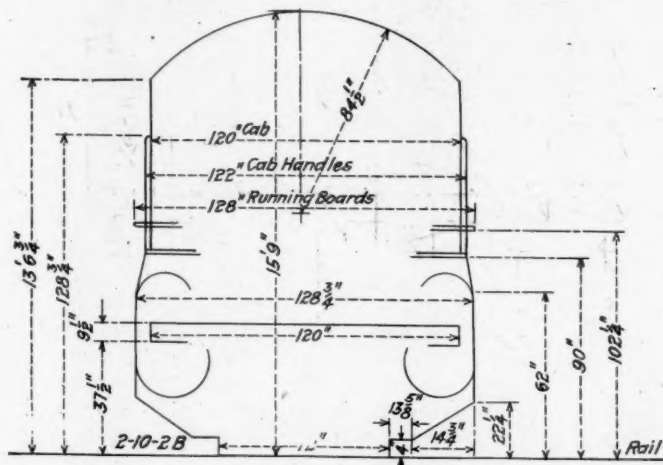


Tonnage Rating Chart of the Standard Heavy Santa Fe Type Locomotive

the main frame, and a Commonwealth cradle casting is spliced to the main frames just back of the rear driving pedestals.

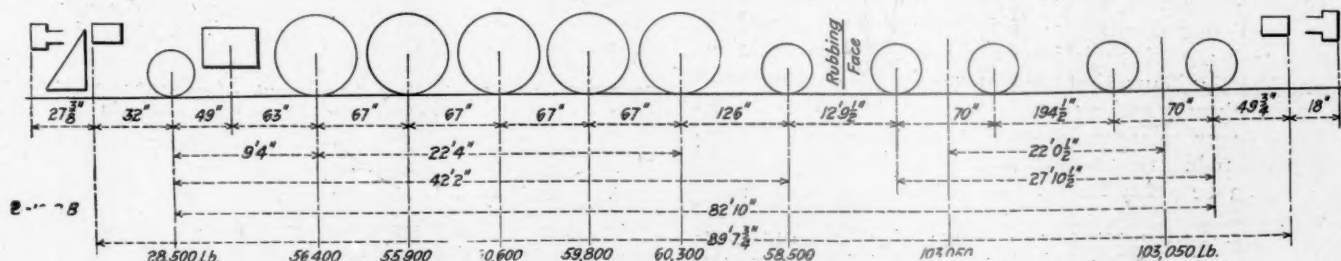
The frames are six inches wide and have a maximum depth of top rail of $8\frac{3}{4}$ in. over the pedestal jaws. The minimum depth of the top rail is seven inches. The maximum and minimum depths of the lower rail are $5\frac{1}{2}$ in. and 5 in., respectively. The front rail under the cylinders is six inches wide and tapers from a depth of $12\frac{3}{4}$ in. at the rear and $11\frac{1}{2}$ in. at the front of the cylinder fit.

The driving axles have journals 10 in. in diameter by 13 in. in length with the exception of the main, the diameter



Clearance Diagram of the Standard Heavy 2-10-2 Type Locomotive

of which is $12\frac{1}{2}$ in. The axles and driving boxes having the 10-in. journals are interchangeable with those of the same journal size on other types of locomotives. This includes the light 2-10-2 type and both the light and heavy Mikado type locomotives. The engine truck under these locomotives is of the constant resistance type and is identical with that used on the 2-6-6-2 Mallet type locomotive. A number of the engine truck details, including the center pin, pedestal, pedestal crosstie, swing bolster, swing frame and link are also identical with those used on the trucks for both Mikado type locomotives and the light Santa Fe type.



Wheel Loading Diagram of the Standard Heavy 2-10-2 Type Locomotive

With the exception of the radius bar these details are also used on the light Mallet locomotive.

The trailer truck is of the Cole-Scoville type and as a whole is not interchangeable with any other class of locomotives. The frame, however, is identical with that used under the light Santa Fe type, both Mikados and the light Mallet locomotives.

The cylinders are 30 in. in diameter with a stroke of 32 in. and are fitted with pistons of single plate dished section similar in design to those used on all the standard locomotives. The valve chambers are designed for the use of 14-in. piston valves. As on the other standard locomotives Hunt-

Spiller gun iron is used for cylinder and valve chamber bushings and piston and valve bull rings and packing rings. The steam distribution of these locomotives is effected by the Southern valve gear and the locomotive is fitted with the Lewis power reverse gear.

Among the principal specialties with which these locomotives are equipped are Chambers backhead type throttle, Ashton $3\frac{1}{2}$ -in. open safety valves, Hancock No. 13 non-lifting injectors, Everlasting blow-off cocks, Detroit six-feed lubricators, Barco flexible pipe joints and Radial buffers and Unit safety bar between the engine and tender.

The tonnage rating diagram was prepared and is copyrighted by H. S. Vincent. The curves of hauling capacity are constructed for a car resistance of four pounds per ton. The chart may be used for any other car resistances by converting them into terms of grade as follows:

1 lb. car resistance	= .05 per cent grade
1 deg. curve uncompensated	= .04 per cent grade

For example, find the tonnage capacity of the locomotive at 20 m. p. h. on .6 per cent grade combined with five-degree uncompensated curve and with a train resistance of five pounds per ton.

The combined resistance in terms of grade is:

$$.6 + (5 \times .04) + (1 \times .05) = .85 \text{ per cent.}$$

At the intersection of the ordinate for .85 per cent grade with the drawbar pull curve for 20 m. p. h. we find 2,100 tons as the capacity of the engine.

The clearance and wheel loading diagrams were prepared in the office of F. P. Pfahler, chief mechanical engineer of the Division of Operation of the Railroad Administration. The weights shown on the wheel loading diagram are actual. Other data and dimensions for this locomotive are as follows:

General Data

Gage	4 ft. $8\frac{1}{2}$ in.
Service	Freight
Fuel	Bit. coal
Tractive effort	74,000 lb.
Weight in working order	380,000 lb.
Weight on drivers	293,000 lb.
Weight on leading truck	28,500 lb.
Weight on trailing truck	58,500 lb.
Weight of engine and tender in working order	586,100 lb.
Wheel base, driving	22 ft. 4 in.
Wheel base, total	42 ft. 2 in.
Wheel base, engine and tender	82 ft. $10\frac{1}{2}$ in.

Ratios

Weight on drivers ÷ tractive effort	4.0
Total weight ÷ tractive effort	5.1

Tractive effort × diam. drivers ÷ equivalent heating surface*	665.9
Equivalent heating surface* ÷ grate area	79.4
Firebox heating surface ÷ equivalent heating surface* per cent	6.1
Weight on drivers ÷ equivalent heating surface*	41.9
Total weight ÷ equivalent heating surface*	54.3
Volume both cylinders	26.4 cu. ft.
Equivalent heating surface* ÷ vol. cylinders	265.2
Grate area ÷ vol. cylinders	3.3

Cylinders

Kind	Simple
Diameter and stroke	30 in. by 32 in.

Valves

Kind	Piston
Diameter	14 in.
Greatest travel	7 in.
Steam lap	1 1/4 in.
Exhaust clearance	Line and line
Lead in full gear	3/16 in.

Wheels

Driving diameter over tires.....	63 in.
Driving journals, main, diameter and length.....	12½ in. by 13 in.
Driving journals, others, diameter and length.....	10 in. by 13 in.
Engine truck wheels, diameter.....	33 in.
Engine truck, journals.....	6½ in. by 12 in.
Trailing truck wheels, diameter.....	43 in.
Trailing truck, journals.....	9 in. by 14 in.

Boiler

Style.....	Con. wagon top
Working pressure.....	190 lb. per sq. in.
Outside diameter of first ring.....	88 in.
Firebox, length and width.....	132½ in. by 96½ in.
Firebox plates, thickness.....	Sides, back and crown ¾ in.; tube, ½ in.
Firebox, water space.....	Sides and back, 5 in.; front, 6 in.
Tubes, number and outside diameter.....	271-2½ in.
Flues, number and outside diameter.....	50-5½ in.
Tubes and flues, length.....	20 ft. 6 in.
Heating surface, tubes.....	3,258 sq. ft.
Heating surface, flues.....	1,469 sq. ft.
Heating surface, firebox.....	429 sq. ft.
Heating surface, total.....	5,156 sq. ft.
Superheater heating surface.....	1,230 sq. ft.
Equivalent heating surface.....	7,001 sq. ft.
Grate area.....	88.2 sq. ft.

Tender

Tank.....	Water bottom
Frame.....	Cast steel
Weight.....	206,100 lb.
Wheels, diameter.....	33 in.
Journals, diameter and length.....	6 in. by 11 in.
Water capacity.....	12,000 gal.
Coal capacity.....	16 tons

*Equivalent heating surface = total evaporative heating surface + 1.5 times the superheating surface.

Orders of Regional Directors

SETTLEMENT OF FREIGHT CLAIMS.—A. H. Smith, regional director, eastern region, by file 2000-63A490, advises federal managers of the grievance of a large shipper who says that the amount of money which his firm has tied up in claims, is out of all reason, and unprecedented. Traffic Department representatives have recently been directed to take an active interest in seeing that claims receive proper and effective consideration, and prompt advice is now requested as to what is being done to relieve the situation.

Fish Fry Free.—The regional director of the eastern region advises federal managers of revised regulations shown in the latest baggage tariff for the free transportation of small shipments of live fish in cans and fish eggs in crates on request of federal or state authorities.

Shortening of Hours of Station Forces.—The regional director, eastern region, by file 1600-88A494, cautions against undue shortening of hours of station forces so as to result in closing stations at the time of arrival of passenger trains or in preventing proper care of freight unloaded from local freight trains. Where it is contemplated to close stations during certain hours that they have heretofore been open sufficient advance notice must be given to patrons with full information as to the arrangements for handling business, so that the public may accommodate itself to the change and no occasion be given for complaint as to lack of essential service.

Assessments for Public Improvements.—The eastern regional director, by file No. 2700-A492, notifies federal managers that the Division of Capital Expenditures no longer requires notice of certain expenditures for public improvements. Authority for railroad expenditure in connection with street or road construction or other public improvements will now be governed by Supplement No. 1 to General Order No. 12, but all cases involving such expenditures in excess of \$1,000 must be brought to the attention of the regional director, before entering into any commitment, in time to make it possible, if it should be decided to do so, to take any steps provided for by statute in connection with the proceedings through which such improvements are ordered or the cost thereof assessed, so that the matter may be considered without embarrassment resulting from legal steps that have already been taken.

Freight Car Distribution.—Circular No. 421 provides

that the distribution of freight cars between railroads in the southern region will be handled through the office of the regional director. The Car Service Section at Washington will issue orders covering movements between regions only. An exception will be made in the movement of refrigerator and tank cars, orders covering which will be issued as heretofore direct to railroads by the Refrigerator and Tank Car Bureau of the Car Service Section located at Chicago.

Inspection at Interchange Points Covering Loading.—Circular No. 422 issued by the southern regional director says that there has been some duplication of inspection at interchange points covering loading, bracing, stability of packages and general condition of freight offered in interchange. Such inspection and records must be made only by the receiving railroad.

Sale of Relayer Rail.—The eastern regional director February 5 announces the abrogation of the rule that relayer rail weighing over 60-lb. per yard should not be sold without first being reported to the Regional Purchasing Committee for disposition. It will now be proper, when advantageous prices can be obtained, to be determined by the purchasing agent, to sell surplus S and Y rail (fit for sidings and yard tracks), and poor quality relayer rail, weighing less than 80 lb. per yd. Any rail weighing 80 lb. or over which may be graded as relayer or good quality siding and yard rail should be reported to the regional director before being sold. All such rail should be used on the home line for repair work as far as practicable.

Agents' and Operators' Wages.—A. H. Smith, regional director, eastern region, by file 1200-4-56A483, furnishes federal managers with a memorandum of a long list of questions decided at a conference on January 27 relating to the requirements of Supplement No. 13 to General Order No. 27 as affecting agents and telegraphers.

Maintenance of Industrial Side Tracks.—A. H. Smith, regional director, eastern region, file 401-14A487 explains to federal managers the policy of the administration concerning General Order No. 15, containing the provisions governing the maintenance of industrial side tracks. In general the maintenance of the tracks from the clearance point to the right of way line is to be paid for by the industry. Special cases should be referred to the regional director.

Transportation of Corporation Officers and Employees.—Order 109 Supplement 11, cancelling Supplement 9, of the Southwestern regional director, similar to Supplement 14 to Circular 29 of the Central Western regional director, abstract of which appeared in the *Railway Age* of January 10 (page 159).

Information Regarding Movement of Troops or Troop Trains.—In Order 159 the Southwestern regional director removed the restrictions on furnishing information concerning movement of troops or troop trains published in Order 112 issued on November 12, 1918.

Earnings of Passenger Trains.—In Order 157 the Southwestern regional director asks that reports be made of passenger earnings for all trains with sub-divisions where the train consist is changed materially. This report should be for the second calendar week in each month, beginning with Sunday, and starting with February. The report is intended to supersede other forms of reports of passenger train earnings now made.

Locomotive Rental Charges.—Supplement 1 to Circular 3 of the Northwestern regional director similar to Order 150 of the Southwestern regional director abstract of which appeared in the *Railway Age* of January 24 (page 257), with the following appended: Joint inspection must be arranged by interested roads upon delivery and return of old locomotives and upon delivery to owner of new locomotives. The government inspection of acceptance from builders will constitute the only inspection necessary on de-

livery of new locomotives. Repairs will be made in all cases by borrowing roads who will keep up running repairs and make repairs due to damages or wrecks.

Transmitting Railroad Initials in Address and Signature of Off-Line Telegrams.—Order 156 of the Southwestern regional director states that when sending messages to points on other railroads, not directly connected with the originating railroads, the initials of railroads to which messages are destined will be placed in the address and the initials of railroads from which messages originate will be placed immediately after the signature. Railroads sending messages to the Railroad Administration at Washington and

to officials of the organization of regional directors, other than the Southwestern regional director, will also place their initials immediately after the signature.

Railroad Business Mail.—Order 158 of the Southwestern regional director amplifies instructions contained in order 151 of the Southwestern regional director, abstract of which appeared in the *Railway Age* of January 24 (page 257), and appends the following statement, "This does not permit handling mail for or from roads not under federal control, except to direct first line connection and care must be taken not to route any U. S. R. A. business mail across non-controlled roads."

Annual Reports of the Regional Directors

Estimates of the Economies Effective and Examples of Co-operative Action Under Unified Control

THE RAILROAD ADMINISTRATION has made public the annual reports of the regional directors for the Allegheny, Southern and Northwestern regions, in addition to those published in last week's issue.

Northwestern Region

The annual report of R. H. Aishton, regional director for the Northwestern region, to the director general of railroads, gives the following recapitulation of economies effected during the year by unified operation:

	Savings per annum		
	Western Region to June 30	Northwestern Region after June 30	Total
Unification of terminals and stations:			
Consolidations	\$1,769,987.00	\$1,350,434.40	\$3,120,421.40
Joint switching	785,190.00	198,510.00	983,700.00
Miscellaneous economies	660,000.00	124,871.60	784,871.60
Reduction passenger-train mileage	22,355,235.00	925,165.00	23,280,400.00
Reduction duplicate freight-train mileage	1,806,636.00	463,916.00	2,270,552.00
Estimated savings, salaries, general office forces		781,439.18	781,439.18
Closing off-line freight and passenger traffic offices		1,744,335.00	1,744,335.00
Consolidation, city ticket offices		310,730.16	310,730.16
Estimated saving in advertising (except newspaper)		445,934.10	445,934.10
Estimated saving in newspaper advertising		510,899.02	510,899.02
Grand total	\$27,377,048.00	\$6,856,234.46	\$34,233,282.46

An abstract of the report follows:

OPERATION

Terminal managers were appointed for the more important traffic centers, but at Seattle only was the supervision of owning roads discontinued and the terminal placed under the jurisdiction of one man. We believe this arrangement will finally prove entirely satisfactory. Ninety passenger and 136 freight stations have been closed.

At Chicago, greater use has been made of the Elgin, Joliet & Eastern and the Indiana Harbor Belt, resulting in better handling of local business in the downtown districts. Heretofore, 19 different railroads, in some cases, served one plant largely for competitive reasons. Wherever possible, switching at one plant is now done only by one line.

The sailing day plan is in effect at every important station in the Northwestern Region. Through cars run from Illinois, Minnesota, Wisconsin, North and South Dakota and Iowa, and from certain Pacific coast points. The operation of pick-up cars on certain days at division points has resulted in a saving of 15,000 cars per month for the region. At Chicago, this plan is under the immediate supervision of the terminal manager.

There has been a reduction of 23,280,400 miles a year in passenger train mileage. The saving per train mile is estimated at \$1.00. Competition prevented a like saving before the government took over the roads.

Based on an estimate of \$2.00 per freight train mile, there was a saving made through elimination of duplicate freight service of \$2,270,552.

The saving of \$781,439 in salaries of general officers is made by transferring these salaries to the corporation pay-rolls.

TRAFFIC

The closing of off line passenger and freight offices saved \$1,744,355 and, in my opinion, it will finally prove as satisfactory for local roads to furnish information, etc., as for off line traffic officers to do so. The consolidation of ticket offices saved \$310,730 and I am entirely satisfied that it will never be changed.

CO-OPERATIVE ACTION

An organization was formed at Kansas City to co-operate with the oil people, resulting in an increase in tank car mileage per day of from 57 to 117. There was an increase in tank car loading, January 1 to June 30, 1918, of 28,569 cars, of which 19,500 was in the period April 30 to June 30. This was accomplished by moving tank cars in solid trains of 25 or more and totally disregarding routing. When the government took over the roads, there was an extreme car shortage in the west, whereas now we can furnish a car for every load offered. The work of the Car Service Section has been most satisfactory. Re-routing of traffic resulted in a reduction of 9,963,633 car miles.

The consolidated purchasing department has not been in operation long enough to determine its ultimate success.

Intensive car loading has been greatly helped by the Food Administration, but now that administration has ceased its activities.

A manager was placed in charge of the upper Lake Michigan and Lake Superior ports to supervise the handling of ore, grain and coal and to co-operate with a committee representing vessel and ore interests. Re-routing by this organization made a saving of 3,577,434 miles. The steaming of ore was almost entirely eliminated; saving, it is estimated, \$197,000.

Budgets of the roads in the Northwestern Region for 1918 amounted to \$24,180,740, but were reduced by \$19,658,887, and, despite labor shortage and influenza, 70 per cent of the improvements authorized was completed on December 15. Co-operation with municipalities resulted in

the postponement of public improvements which would have cost \$19,332,593, which includes \$924,195 savings made by the unification of terminals.

Since the last wage award, there has been a rapid improvement in maintenance of equipment work, and standard equipment will eliminate the necessity of carrying large quantities of material. A very careful analysis and study of the entire railroad situation under unified control has shown that there are very wasteful practices in effect under separate operation.

Allegheny Region

C. H. Markham, regional director for the Allegheny Region, has submitted a report, of which the following is a summary:

	Men. released for other service	Saving per annum
(a) Unification of terminals and stations, 875...	1,552	\$4,037,526
(b) Elimination of passenger service, saving train miles per annum, 7,683,432.....	658	5,914,203
(c) Reduction in organizations contrasted with same under corporate control: Saving due to the elimination of corporate organizations .....	.....	1,828,071
Unifications and discontinuance of operating and traffic offices.....	692	1,168,866
(d) Miscellaneous economies, the result of causes other than the above: Advertising discontinued .....	.....	450,640
Road unifications	290	1,710,954
Grand total (a), (b), (c), (d).....	3,192	\$15,110,260
(e) Recapitulation of co-operative action, the results of which are in the direction of efficiency but intangible as to economies:		
Freight traffic diversions.....	Number Cars diverted 251	317,604

The above figures include unifications made on the roads in this region prior to the formation of the Allegheny region.

The Allegheny Region was the center of most intensive war work activity. Baltimore & Ohio freight trains between McKeesport and New Castle were routed over the Pittsburgh & Lake Erie, one locomotive handling the same tonnage over this road as five locomotives over the Baltimore & Ohio, between the same points. Westbound coal from the lower Connellsville region and the Fairmount district was routed over the Monongahela, Pittsburgh & Lake Erie, and the Pennsylvania, releasing the Baltimore & Ohio for east-bound business. Baltimore & Ohio business from West Virginia and from Pittsburgh was routed by way of the Rutherford gateway and by the Philadelphia & Reading, thus keeping the business out of Baltimore and Philadelphia. Anthracite coal from Pottsville and Shamokin was moved to Baltimore and Washington by way of Harrisburg instead of Philadelphia.

The Western Maryland and the Baltimore & Ohio lines between Cumberland and Connellsville were operated as one division, as were also the Cumberland Valley, Western Maryland, and Philadelphia & Reading between Cherry Run and Harrisburg. The Huntington and Broad Top Mountain was operated as part of the Juanita division of the Pennsylvania. The Philadelphia & Reading, New England coal fleet was operated from Port Reading instead of Port Richmond, saving 185 miles of water movement with an increase of only 70 miles road haul.

Appointment of terminal managers in charge of operations of all lines at Baltimore, Philadelphia, and New York, and the permit system regulating the flow of traffic in accordance with ability to handle at seaboard destination, have been of great value.

From June to October there were over 900 passenger cars exclusively assigned to the transportation of war workers, and during the same period nearly 9,000 troop trains were moved in the region. During the period there were many unifications of terminals and stations made, among the most important of which to the traveling public was the use of

the Pennsylvania terminal at New York by Baltimore & Ohio and Lehigh Valley for through trains.

As illustrating the density of freight traffic, in October, 1918, the region had 5.6 per cent of the average mileage of federal controlled railroads in the United States while it transported 14 per cent of the total net ton-miles of all such railroads. The results of operation are not available for November and December, but for the period from June to October, inclusive, the region handled 1,233,396,959, or 4.4 per cent more tons one mile and transported 447,002,496, or 14.7 per cent more passengers one mile than in the corresponding period the previous year.

Considering the large increase in business and the fact that many experienced employees entered the military and naval service or were engaged at munition plants or other lines of war work, their places being taken by less experienced employees, both passenger and freight business was well handled. I am pleased to say that we have had the hearty co-operation of all the officers and employees of railroads in the region, and to this I attribute in a large measure the success in handling the business.

During December, 1918, weather conditions in Allegheny region were favorable to operation, and the railroads were able to furnish ample transportation to handle an increase in both freight and passenger traffic compared with December, 1917.

Anthracite coal loading increased 1,456 cars, or 2.9 per cent; bituminous loading increased 35,944 cars, or 17.7 per cent; all coal loading increased 37,400 cars, or 14.8 per cent, compared with December, 1917. Total revenue freight loaded increased 64,803 cars, or 8.9 per cent; and total revenue freight received from connections increased 108,913 cars, or 17.2 per cent, compared with same month last year.

Tidewater coal dumped was 2,158,491 tons, increase of 471,117 tons, or 21.8 per cent, compared with December, 1917.

At close of month there were stored 12,000 open-top and 10,000 closed cars for which there was no demand. Including this surplus, cars in Allegheny region equaled 99 per cent of ownership, compared with 115 per cent June 1, 1918.

With the exception of movement controlled by permits, the region continued clear of embargoes on carload freight, and no embargoes at transfer platforms against l. c. l. freight.

Report of blast-furnace operations December 31 shows no furnaces out due to transportation deficiencies.

Passenger travel was heavy, due to holidays and the large number of soldiers and sailors on furlough and discharged. Generally speaking, the travel was satisfactorily handled. Extra coaches and parlor cars, and in many cases extra sections of passenger trains, were operated to handle the holiday travel. Passenger-train schedules were maintained with reasonable regularity, considering the volume of traffic handled. United States mail and express were satisfactorily handled. Troop movements continued light. Due to cessation of hostilities, 24 trains serving war industries were withdrawn during the month.

The bad-order car situation compares favorably with November, 1918, although repairs were retarded, due to a week of rainy weather in early part of the month. Locomotive output also compares favorably with previous month. Railroads received 14 locomotives built in their own shops and 19 from locomotive builders, leaving 383 locomotives (including Pennsylvania lines west) to be received to complete 1918 program.

Thirty-four unifications of facilities were effected during the month, resulting in an annual saving of \$326,243.

Ability to recruit labor forces, along with open weather, enabled satisfactory progress being made on addition and betterment work. Completion of engine-house and yard im-

provements is being pushed, and a large portion of these facilities are already completed.

Southern Region

B. L. Winchell, regional director of the Southern region, has submitted his report, of which the following is a summary:

C. H. Markham was director general from January 18, to June 1. Prior to January 18 the roads in the Southern region dealt directly with the Washington administration.

The financial outcome of the regional operation for the year (December estimated) was as follows:

Railway operating revenues.....	\$547,777,171	
Railway operating expenses.....	423,276,752	
Net revenue from railway operation.....		\$124,500,419
Railway tax accruals, less war taxes.....	19,270,592	
Uncollectible railway revenues.....	100,990	
		19,371,582
Railway operating income.....		\$105,128,837
Equipment rents, net (Cr.).....	665,804	
Joint facility rent, net (Dr.).....	1,286,101	
		620,297
Net railway operating income.....		\$104,508,540
Estimated average annual standard return.....		\$92,183,911
Excess above standard return.....		12,324,629
Percentage relation of net railway operating income to standard return.....		113.4
<i>Summary of certain savings</i>		
Unification of terminals and stations.....		\$2,182,260
Elimination of passenger trains.....		1,625,941
Reduction in organizations as contrasted with the same under corporate control.....		2,925,073
Miscellaneous economies the result of causes other than above.....		
1. Saving in advertising expenses.....	\$402,938	
2. Reduction in freight-train service.....	312,309	
3. Consolidation of general office forces and elimination of special departments, etc.....	253,728	
4. Telegraph and telephone unification.....	76,260	
5. Sundries.....	197,406	
		\$1,242,641
Total of above.....		\$7,975,915

By the co-ordination and connecting up of telegraph and telephone service of the various roads, the use of commercial telegraph companies' wires for railroad messages has been greatly reduced and the service improved.

Based on the actual re-routing of freight during one week, it is estimated that there is an annual saving from this source of approximately 41,452,216 car miles or 40,560 cars (on a basis of 28 miles per car per day) or of \$81,120,000 in investment (based on \$2,000 per car). The saving in operation at five cents per car mile would be \$2,072,610.

Average car loading in the nine months to August, 1918, was 25.5 tons as against 23.8 tons for the corresponding period in the previous year.

Safety work is being pressed with vigor.

Number of accidents to employees of railroads in the Southern Region during the months of August, September, October and November, 1918

	Killed	Injured
August.....	43	2,067
September.....	36	1,787
October.....	26	1,441
November.....	31	1,269

This shows a reduction of 27 per cent in fatalities and 38 per cent reduction in injuries, November compared with August.

There was a saving through elimination of \$1,618,107 passenger train miles, of \$1,625,941. (It is estimated that passenger train service costs about \$1 a mile.) The percentage of increase or decrease in average train load, April to October, inclusive, in 1918, as compared with the same months in 1917, are as follows:

April.....	increase	0.8 per cent
May.....	decrease	7.2 per cent
June.....	decrease	5.7 per cent
July.....	increase	2.1 per cent
August.....	increase	5.4 per cent
September.....	increase	4.0 per cent
October.....	increase	6.7 per cent

In the 10 months ended December 31, there were 4,796,833 cars loaded, compared with 4,955,006 in 1917, and

2,796,832 cars received from connections, compared with 2,602,986 in 1917, an increase in total cars of 135,682.

In the Southern region 23 consolidated ticket offices took the place of 75 separate offices, and the expense of operation of the consolidated ticket offices was \$200,167 as compared with an expense of \$197,667 for the separate offices in 1917, an increase in expenses of \$2,500. There was an increase in the sales of tickets in 1918 of \$1,041,903 or 10.93 per cent. The expenses of depot ticket offices in 1918 was \$338,474, as compared with \$208,885 in 1917, and there was an increase in ticket sales of \$14,827,283, or 55.12 per cent.

Passengers carried one mile totalled 4,847,029,611 for the ten months ended October 31, 1918; an increase of 1,402,351,278 over the corresponding ten months of 1917, or 40 per cent.

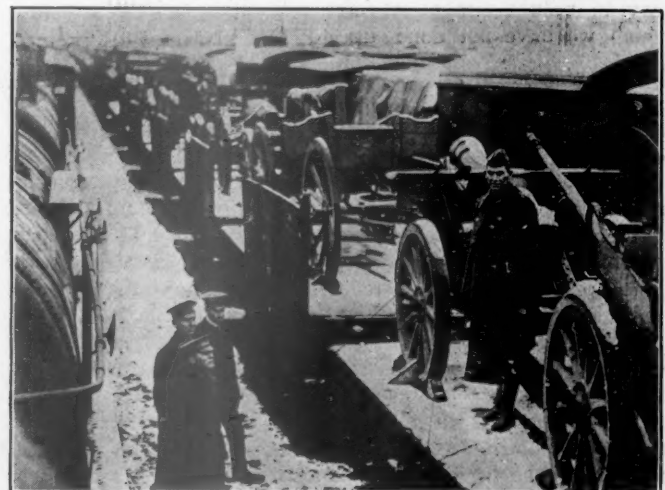
Statement showing for class I roads in Southern Region the increase in freight and passenger revenues (accounts 101 and 102) by six months' periods, January to June and July to December, inclusive, 1918, over 1917 (December estimated).

Freight:	This year	Last year	Increase	Per cent
First period.....	\$155,552,228	\$138,703,792	\$16,848,436	12.1
Second period.....	203,577,951	147,860,322	55,717,629	37.7
Total.....	\$359,130,179	\$286,564,114	\$72,566,065	25.3
Passenger:				
First period.....	\$66,081,693	\$42,802,295	\$23,279,398	54.4
Second period.....	82,022,350	57,922,426	24,099,924	41.6
Total.....	\$148,104,043	\$100,004,721	\$47,378,322	47.4

Few of the public, except large employers of labor, can have any fair conception of the difficulty of railroad operation during the past year with such a considerable proportion of untrained men in the service, replacing those skilled operatives who responded so loyally and so freely to the call to arms.

Now that the war pressure is somewhat relieved, the feeling will be more or less generally and naturally held that the transportation troubles of the roads are over. It should be made plain to everyone that but few of the many train and enginemen, shop, bridge, track and station forces, superintendents and trainmasters, general managers, general superintendents, and other skilled and valuable factors in the successful operation of our railroads have as yet been released from the colors and actually back in our service.

We need them to "carry on" in our best manner.



Three American Majors and a German Representative in the Freight Yards of Coblenz Inspecting a Trainload of German Field Pieces Surrendered to the Yankees Under the Terms of the Armistice

The Railway Supply Industry Is Hard Hit

IN LAST WEEK'S ISSUE the *Railway Age* published a large number of communications from railway supply companies, sent in reply to a night letter from the editors asking for a statement as to what the policy of deferring maintenance and renewals, not to speak of betterments, means "to your organization and labor, now and in the future." The following letters sent in reply to the telegram were received too late for publication in last week's issue.

Barco Manufacturing Company Chicago.

We are being seriously affected in our business by the attitude of the Railroad Administration toward improvements and railroad expenditures. If their policy continues we will be running our shop on half time, and probably not that much.

The motive power has not yet been brought to a proper state of efficiency, but it has reached the point where it is giving the public and the railroad officials some satisfaction. Under the apparent policy of the Railroad Administration our motive power and tracks will be a national disgrace inside of three months, with the shops, roundhouses and working conditions as they are, and with the railroads laying off men and refusing to buy material.

It is astonishing that the administration should demand that manufacturers re-employ returned soldiers and keep their factories busy when they refuse to keep active the only industry that they control, and the largest industry in the world—the railroads.

Money invested in the railroads at this time will be a national benefit for generations to come. The Railroad Administration should play fair with the public, the railroads, the railway supply industries and their employees.

There will be no substantial reduction in prices unless the supply industries are busy.—*F. N. Bard, Vice-President.*

Boss Nut Company Chicago.

Our railway department operated at less than one-half its capacity during the year 1918 as compared with 1917. Shop force in this department reduced to about 60 per cent of 1917 average. To continue operations profitably it will be necessary to reduce our sales force and other selling expense, which we have not done up to the present time.—*J. A. MacLean, Vice-President.*

Onondaga Steel Company, Inc. Syracuse, N. Y.

In conversation yesterday with a prominent engineer connected with one of the steel mill equipment manufacturers of the Pittsburgh district we were informed that the steel companies had several months before the armistice was signed placed orders with them for rolls and equipment designed especially for the reconstruction period.

Today the steel corporation and other large producers are fully equipped for the enormous demands that they have every reason to expect should be made on them.

Our own efforts have been along this line, not only in equipment but in organization as it is particularly difficult to build up the personnel of a tool steel mill.

Every department calls for a high degree of expert knowledge. Even the common labor in a mill producing exclusively high-speed steel must be trained to a knowledge of the value of the material produced and the care necessary in handling it, as a few pounds waste means many dollars loss.

We steel people who have dug into our own pockets—thus giving proof of our faith in the country and its capacity for reconstruction—feel that we have every right to demand of our leaders in Washington a similar policy as applied to our railroads.

We depend upon the railroads and railroad equipment people for 40 per cent of our business, and if they cannot take the attitude of faith and confidence in the future shown by the manufacturing public we must face not only a 40 per cent reduction in our working force—but an added reduction because of the railroads being unable to handle adequately the business of the country. Consequently, the inability of other lines of business to carry on as they had every reason to plan.

Come on, you railroads! Your country needs you—*S. S. Buckley, President.*

Reading Steel Casting Company Reading, Pa.

The sudden ending of the war has made necessary a curtailment of production of iron and steel products. In turn it has been necessary for the manufacturers to lay off a great many employees regardless of the fact that it is practically impossible for these employees to obtain work elsewhere. If the Railroad Administration continued its purchases for maintenance, renewals and betterments at this time it would be possible for the industries to continue the employment of practically all the men on their payroll during the war period.

We are firmly of the belief that the greatest destroyer of social unrest is steady employment. The best way to maintain steady employment in the steel and iron industry is for the railroads to continue their purchase of material for maintenance renewals and betterments.—*J. Turner Moore, President.*

Joseph T. Ryerson & Son Chicago.

This policy of deferring maintenance and renewals cannot but work havoc with our railroad business if continued long enough. Just now our mill is full of work on orders placed sometime ago which we were unable to get out before on account of lack of raw material and fuel, but we will finish up these orders in the course of time, and as there is no new business coming in the result will be a shutdown of the mill affecting the employment of some 300 men, as the entire output of this particular mill goes to the railroads. This action, however, will not be necessary for some months under the present condition of our order books. The immediate effect of the government's policy, however, is that we have stopped buying pig iron and fuel for future requirements, as we cannot buy raw materials without the prospect of their sale.

In our warehousing department the effect is immediately apparent in lack of orders which will, no doubt, cause some reduction in our working force and stoppage in the purchase of steel, for the percentage of this business which ordinarily goes to the railroads. As stated before, there is no immediate lay-off of men contemplated, but unless there is a resumption of buying within the next 30 to 60 days results cannot help but be serious.—*Howard A. Gray, Manager Railroad Sales.*

The American Train Despatchers' Association has organized a local assembly at Chicago, with O. J. Schwartz, train despatcher on the Chicago & North Western, as chairman, and W. A. Kraemer, also a train despatcher on the North Western, secretary and treasurer. About 150 chief train despatchers and despatchers were present at the first meeting. The second annual convention of the association will be held in Chicago, June 17 to 20, inclusive.

Railroad Hearings Before Senate Committee

Labor Organizations Unite for Government Ownership—Want Share in Management and Profits

WASHINGTON, D. C.

FOURTEEN RAILROAD LABOR ORGANIZATIONS, claiming to represent nearly 1,900,000 employees, have endorsed the plan proposed last week by Glenn E. Plumb, representing the four brotherhoods, providing for government ownership of railroads and operation by the employees on a profit-sharing basis. A. B. Garretson, president of the Order of Railway Conductors, testified before the Senate committee on February 10. The plan as outlined by Mr. Plumb was described in last week's issue. It provides for operation by a single corporation, administered by a board of directors, of which one-third would be chosen by the President, one-third by the classified employees and one-third by the appointed officers, profits above the fixed charges necessary to pay interest on the bonds to be divided between the government and the employees, who would receive a wage dividend in proportion to their wages. Mr. Plumb also opposed the plan for a five-year extension of the present federal control but said that this opposition would be withdrawn if the general order issued by Mr. McAdoo restraining political activities on the part of railway employees should be revoked, and both he and Mr. Garretson presented several arguments for the five-year plan.

Mr. Garretson appeared before the committee as the representative of all the 14 organizations that have agreements with the Railroad Administration, the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen, the Order of Railway Conductors and the Brotherhood of Railroad Trainmen, which he said represent 400,000 men, and also the following organizations affiliated with the Railroad Employees' Department of the American Federation of Labor, which he said represent 1,500,000 men: International Association of Machinists; International Brotherhood of Blacksmiths and Helpers; International Brotherhood of Boilermakers, Iron Shipbuilders and Helpers; Amalgamated Sheet Metal Workers' International Alliance; International Brotherhood of Electrical Workers; Brotherhood of Railway Carmen; Brotherhood of Railway Clerks, Freight Handlers and Station Employees; Switchmen's Union of North America; Order of Railroad Telegraphers and United Brotherhood of Maintenance of Way Employees and Shopmen. All of the members of these organizations are not employed on railroads, some being employed in contract shops. The organizations affiliated with the American Federation of Labor have recently taken a referendum, which resulted in an almost unanimous vote for government ownership and the executives of the 14 organizations held a meeting in Washington last week for the purpose of agreeing on a plan to be presented to the committee and of drafting a proposed bill.

Converted by Results of Past Year

Mr. Garretson said that these 14 organizations represented almost the entire body of railroad employees, with the exception of a few small unions, the men who have not been in service long enough to be eligible to membership, and those who have not joined the unions. The Plumb plan, he said, has the unqualified endorsement of the representatives of the organization as far as its principle is concerned, but there has been no endorsement of any given detail of the plan. Because of the diversity of opinions as to the various phases of any scheme, he said, there has been no attempt at agreement on the mechanics of the application of the plan. Three of the executives of the four brotherhoods, W. S. Stone, Timothy Shea and W. G. Lee, had always been opposed to government

ownership. Mr. Garretson said, while he had been an advocate of it, and many of the heads of the other organizations had also been against government ownership, but they had been converted to government ownership as far as railroads are concerned by the experience of the past year of government operation as contrasted with the old conditions under private management. The plan has not had a fair trial as to its efficiency because the government took over the roads at a time when they were in bad condition and operated them under the abnormal war conditions, and the wonder is, he said, that the Railroad Administration succeeded as well as it did, not that it failed in some particulars, but the employees had seen in the year's operation "the germ of what might be after a fair trial".

"The real question before Congress," Mr. Garretson asserted, "is not the adoption of a comprehensive plan for the operation of the railroads but a declaration of policy for the future as to whether the railroads are to be administered as an appanage of the government or as a private enterprise. We are of the strong belief that they can best be administered through a direct government agency furnishing transportation not for profit but at cost. If you make the government responsible for any deficits you have gone far towards government ownership, and the government should be entitled to share in the profits. All of the plans presented here that demand a government guarantee of returns recognize the principle of government ownership. If government regulation creates a deficit on some roads and it is proposed to have the government make it up by a guarantee it is only consistent to go to government ownership and put all the earnings in one jackpot."

Mr. Garretson elaborated on his idea that any plan of guarantee comes very close to government ownership, saying that all the plans come to the same thing, a proposal that the government stand the deficits and the corporations keep the profits. He said the idea of a guarantee necessarily carries with it supervision of operation to ascertain that operation is on an efficient basis and that the government cannot effectively equalize conditions on different railroads unless it can avail itself of the surplus earned by some railroads, and he declared that the removal of the speculative element in railroading would kill all hope of competition or efficient operation. He also insisted that under any plan of guarantee a valuation would be essential.

Mr. Garretson traced the history of railroad consolidations into the present large systems and said that now the director general proposes a further consolidation into six to 12 regional systems. The next logical step, he said, is consolidation of all the roads under one head because if six consolidations would be a good thing, one would be still better and such a consolidation would never be permitted to be handled by a private corporation. Returning to his idea of transportation at cost, Mr. Garretson declared that a public utility serving the common necessity should furnish its service at cost without any increase of the cost to pay a profit. The basic purpose of a corporation is to make a profit and the tendency is toward constantly increasing rates. Under the plan proposed by the brotherhoods there would not only be a saving in interest rates but the balance over fixed charges would be divided equally between the government and the employees so that the government's share could be used as a sinking fund, which would eventually retire the bonds so that the public would get its transportation at cost. He did not refer to the share which would be divided among the employees as a profit, but as an

"incentive to efficiency." Senator Underwood pointed out that we have had a test of one year of government operation and that it had cost more to operate the roads than under private management. He asked if Mr. Garretson could explain why this was the case. Mr. Garretson did not directly answer the question, but said he had pointed out to Mr. McAdoo four days after he became director general that government operation would not have an honest test if faced with a time limit and uncertainty as to whether the railroads would be returned. Railroad officials, he said, have been trained to look to Wall Street for preferment and until they have become absolutely convinced that their future lies with the government instead of Wall Street the operation will not be successful. He made no direct charge against the railroad officers, but referred to a "passive resistance," manifested "not in what a man does, but in what he does not do." He illustrated the position of the railroad officials by the story of the donkey-driver who encouraged his animal by suspending a cabbage in front of his nose just out of his reach, saying that when the railroad officials realize that the cabbage is held by the government they will give just as honest service to the government as they ever did to Wall Street.

Mr. Garretson said that many newspapers had described the brotherhood plan sarcastically as meaning a proposal that the employees run the railways. He said he was willing to discuss this question seriously as a legitimate business proposition and without sarcasm. Other interests, he said, are willing to propose a government partnership in the losses, but are silent as to partnership in the profits, whereas the employees are willing to go into partnership with the government and are willing to take the officials into partnership also. He asked whether it would be better for the government to enter into partnership with corporation seeking a profit or with the men who do the work and who only ask wages and a share of the profits. There have been thousands of profit-sharing schemes, Mr. Garretson said, but this is the first true profit-sharing scheme ever presented to any industry.

As to the desirability of the plan for a five year extension, Mr. Garretson said the representatives of the 14 labor organizations have varying opinions. Personally, he thought there were arguments both for and against it. If the extension would defer a final conclusion as to the railroad problem it would be a calamity, but if the period were used for studying and laying out a permanent plan of action it would be desirable. Congress should first, however, lay down a policy as between government ownership and private management. If the policy is to be private management the machinery is in existence and can be oiled up and refurbished in three or four months. If the policy is to be government ownership much time will be required to develop the new machinery. But, he said, it is not desirable that the railroads be returned until there has been a decision as to what the policy is to be because the return will doubtless be attended with the same chaotic conditions which existed for a time after the railroads were taken over and the public will suffer. Mr. Garretson argued that one advantage of government ownership would be the opportunity to eliminate seasonal unemployment. He said the world owes every man a living and society has to support the burden in one way or another. If free transportation or transportation at cost could be furnished to move labor from regions where there is a surplus to others where it is needed, unemployment could be done away with to a large degree.

In concluding his statement, Mr. Garretson uttered a warning that any attempt to reduce the wages established during the past year would arouse the army of discontent in a way that would shake the social structure. He said he was not in sympathy with Bolshevism, I. W. W.-ism, Socialism or Anarchism, but he recognized some of the causes of which they were the result and which must be relieved.

Replying to questions by Senator Cummins, Mr. Garretson said that never before has a profit-sharing plan been proposed

which provides for any equitable division of profits among all who participate in the enterprise. The idea of profit-sharing carries with it the idea of limitation on unreasonable profits and the problem of industrial unrest can never be settled until this question is settled. He declared that wage increases alone would not solve the problem because a wage increase merely gives to a favored class at the expense of those who do not get corresponding increases, not at the expense of the employer, and that increases in wages may leave labor worse off than before if the purchasing power of money is thereby decreased. He said he had made a study of the family budgets of 2,500 conductors, which showed that in 1910 or 1912 when a freight conductor's rate was \$4.18 a day they had \$11 less surplus at the end of the month than in 1890 when a freight conductor's pay was \$3 a day.

He said that wages should be fixed by a tribunal so constituted that no one element should determine its own wages, as the official class had been able to fix its own compensation, and he advocated a plan similar to that put in effect by the Railroad Administration when it constituted boards of adjustment composed of an equal representation of employees and officials. The board that deals with brotherhood affairs he said had settled 300 cases without a dissenting vote, but whereas the present boards do not deal with wages and the director general is in effect an umpire, the Plumb plan provides for similar boards to fix wages with an appeal in case of a disagreement to the board of directors of the proposed national corporation.

Right to Strike Reserved

Senator Cummins asked if under government ownership the employees would insist on their right to strike. Mr. Garretson replied that the relation between the government and the employees should be the same as between the employees and any employer and that the rights of citizens should not be affected by government employment. The right to strike must necessarily be retained, he said. Any body of men will always obey the law until a stage of irritation has been reached that carries them beyond control, when they will exercise their right to overturn existing arrangements in the same way that men have always acted. He referred to the Canadian Lemieux Act as proof that the enactment of a law that it is known will be broken is the height of unwisdom, saying the time will always come when men will break a law which they think violates their inherent rights.

Mr. Garretson concluded his testimony on Wednesday and was excused from appearing on Thursday because the brotherhood leaders had an appointment for a conference with the director general and his staff, on the proposed increase in wages now under consideration by the Board of Wages and Working Conditions, but he may be recalled later.

Opposition to Five-Year Plan Based on Political Order

While reading his prepared statement last Friday outlining the plan for Government ownership proposed by the brotherhoods, Mr. Plumb indicated that the opposition to the five-year plan would be withdrawn if General Order No. 48 restraining political activity on the part of the employees is modified, and in discussing conditions on the assumption that the order would be modified he presented several arguments in favor of the five-year plan as providing a period of stability during which a permanent plan could be worked out. He said, however, that if a permanent plan can be worked out in less time, the present system of Federal control should be terminated without running for the full five years. While Mr. Plumb was discussing the political order, Senator McLean interrupted to ask: "If the order should be revoked, would you still be against the five-year plan?"

"That is our only objection to the five-year plan," replied Mr. Plumb. "The purpose of an extension is to allow time for a political solution of a great social issue, and under this order we would be precluded from full participation in the

working out of that solution. We cannot afford to leave to the financial interests complete freedom while we were limited in participation. If we were not debarred from participation in the final solution, then I am frank to say our objection to the five-year plan would be eliminated. Mr. Hines' arguments are very cogent. We agree that 21 months is not sufficient for a complete solution."

"Have you or your associates had any intimation that this order will be revoked?" asked Senator McLean.

"I have no such intimation," replied Mr. Plumb, "but Mr. Hines has impressed me and my associates with his supreme fairness toward every question and it, therefore, seems to me there is hope for the elimination of this objection. However, Congress should get busy at once, and if it is possible to get a solution in one or two years, the extension should be made subject to that possibility and the present system should not be continued longer than is necessary. If there can be a period of stabilized conditions while Congress is working on this problem it would be in the interest of the public and labor is particularly interested. The railway executives did not say that the wage level is too high, but none would say the status would be preserved and one said that wages should be governed by the law of supply and demand. As between a great monopoly and a body of organized employees, that don't mean supply and demand at all. It merely means a trial of strength. If we can protect the status while the solution is being worked out, that would be very desirable.

Mr. Plumb concluded his prepared statement near the end of the session and was not questioned at length. Senator Underwood pointed out that efficiency does not depend entirely upon the employees, but "comes from the top down" and goes with the appointing power. Mr. Plumb admitted the force of this statement, although he had emphasized the skill and industry of the employees, but he said that the labor plan proposed to retain efficient executives but did not want to continue in office inefficient men who may happen to be in control of capital.

Senator Cummins said that we must think now and then of those who pay the bills for railroad service as well as those who receive the money, and he asked how the Interstate Commerce Commission in fixing rates would determine how much surplus to allow to retain the interest of labor. Mr. Plumb suggested that the present level of wages and rates be taken as a starting point and said that labor would get nothing by way of a dividend until by efficiency it produced enough to pay it and that the Government would receive a surplus to be used as the basis for a reduction in rates before there would be any profits for labor to share. He said the commission would be dealing with a mathematical problem in fixing a general level of rates, but that it would sit practically as a tax-fixing body in distributing the rates as between classes and commodities. Senator Cummins also asked Mr. Plumb if he had considered the probability that if Federal control is extended for five years it will be accepted as disposing of the subject for the time being and that Congress will not be likely to take up the permanent solution until shortly before the expiration of the period. Mr. Plumb agreed that that might be so, but thought that the danger of loss to capital in letting the situation become more complicated will be a force that will impel them to seek an early solution and that the public will feel it is paying too much and will demand a quick settlement. Also, he said, labor will lend all its force toward a quick solution which would remove the uncertainty, but he felt that 21 months might be too short a time in which to accomplish permanent results. Senator Cummins declared he was of the deliberate opinion that if the time is extended for five years nothing will be done of a decisive character until immediately before the expiration of that period. Now, he said, is the psychological time to work out a permanent plan. Everybody is interested

in the question, all the various interests are proposing plans, and if this opportunity be allowed to pass the whole inquiry must be made all over again. Mr. Plumb said that the proposed five-year extension of the present system does not approximate any plan which is being suggested and that the sooner a definite, permanent plan can be agreed on the better, but by no means, he said, should the roads be permitted to be turned back until a permanent plan is adopted, whether one or five years is required.

Southern Shippers Opposed to Five-Year Plan

Charles E. Cotterill, general counsel of the Southern Traffic League, presented a statement of policy adopted by the league after a referendum of the 46 chambers of commerce which composed its membership opposing Government ownership or any extension of Federal operation beyond the period now provided by law and favoring the return of the railroads to private control and operation subject to Government regulation as speedily as may be practicable. The league favored preserving under private control and operation such economies of transportation as may have been developed under Federal control to the extent that the service may be improved without inflation of charges or undue inconvenience of the public or the impairment of wholesale competition. The league opposed any governmental guarantee of income, and, while favoring the principles of fair return upon the investment, opposed any system of rate construction designed to accomplish this without due regard to other factors properly to be considered in the making of just and reasonable rates and also the unrestrained assertion of Federal authority in the regulation of traffic that is purely domestic to the several States.

Mr. Cotterill said his clients could not appreciate the argument that Congress should enact a radically new system of legislation before returning the railroads to their owners. They felt some requirements ought to be adopted, but saw no reason why the railroads could not be returned as soon as the practical obstacles to their return can be overcome. He said the present period of Federal control has been one continual wrangle between the Administration and the shippers, during which they have had to call on their representatives in Congress several times for protection, and they wanted this condition terminated. He referred particularly to the proposal of the Administration to substitute the interstate basis for State rates before applying the 25 per cent increase, which had been withdrawn on account of the opposition of the Southern shippers, and to the proposals of the Administration to put into effect a uniform mileage scale of class rates. He said the shippers were not interested in State rights but that the jobbing business of the South was seriously menaced by the efforts to abolish the State rate basis and that the Director General has said he would put the mileage scale into effect, although the Interstate Commerce Commission has recommended against its being taken up at this time. Mr. Cotterill severely criticised some of the acts of the Railroad Administration and the effects of the elimination of competition and presented numerous arguments against the policy of Government ownership.

"We doubt the value of the sociological experiment of Government ownership and operation of our railways," he said. "Were our mileage one-fourth as great and the traffic one-fourth as large, Government ownership might be a success, but with the vastness of our railways and their operations before us we would be gravely concerned over any prospect that the Government itself might enter into such a domain and take over our greatest industrial activity. Under private initiative our railways have developed into the greatest transportation system in the world, which might not have been the case had the Government owned the railways from the beginning."

Regarding the plan of Federal control, Mr. Cotterill said:

"From the standpoint of physical operation it may be conceded that during the past year a very difficult war situation was met in a very effectual way. But it must be remembered that, after all, it was the railway men themselves who achieved those operating results, the only difference being the disregard of all legal restrictions formerly placed upon the railways and the advantage of compulsory co-ordination of their activities.

"But it has been an expensive enterprise for the shipping public. If cost be disregarded it would be possible to build and operate our railways in an ideal way. There is no way by which to calculate the precise additional cost of Federal operation during the past year, but the fact remains that it increased almost beyond comprehension. We take no broad exception to the wage increases that were allowed; but we cannot avoid the remark that the rate of pay accorded negro railway labor in the South has exceeded all bounds of reason and has brought about a very unhealthy condition. Perhaps that phase of the matter must be regarded as a necessary incident of the war.

"Had the Railway Administration confined itself to the fulfillment of its immediate purposes as a war tribunal, perhaps there could be no criticism of its past record. But the shippers of the South have had to contend with a very difficult situation arising from the fact that the Railroad Administration did not confine itself to war activities but instead entered upon and indulged in all sorts of innovations and revolutionary changes which threatened to work great hardship upon them, and in many cases did so.

To be more specific, the director general built up an organization and surrounded himself mainly with former railroad officials and employees. In the nature of things the director general personally did not and could not know the full consequences of all that was proposed in his name. To us in the South it seemed at times as if the former railway officials, anticipating the eventual return of their railroads, were taking advantage of Mr. McAdoo and of the situation generally, to put into effect cherished ideas of reform which, without the very great power of the director general, could never be made effective."

C. W. Bunn, general counsel of the Northern Pacific, testified before the Senate Committee on Thursday, advocating a plan by which the Interstate Commerce Commission be given power to review State-made rates to bring them into harmony with interstate rates. S. Davies Warfield also presented a supplemental statement regarding his plan which was presented last week. G. M. Freer, president of the National Industrial Traffic League, and N. L. Amster, president of the Investors' Protective Association, were to follow on Friday.

The committee has decided hereafter to hold hearings only on Tuesdays and Thursdays. The House Committee on Interstate and Foreign Commerce proposes to begin hearings soon on the railroad question.

Rivers and Harbors Congress

FEDERAL SUPERVISION of water transportation under a department of transportation or a bureau of the Department of Commerce and extension of the jurisdiction of the Interstate Commerce Commission over rail and water rates together with improvement of all navigable streams upon which commerce could be established were recommended to Congress in a declaration of principles adopted by the National Rivers and Harbors Congress at its fourteenth annual meeting in Washington last week. Co-ordination of rail and water facilities and the elimination of destructive competition between them were also favored.

Walker D. Hines, director general of railroads, addressed

the meeting on the subject of the co-ordination of rail and water facilities and urged extension of the present system of federal control for the purpose of giving it a better opportunity to work it out. "I cannot reconcile myself," he said, "to the view that a great national highway like one of our waterways can properly be regarded as economically useless. The government has devoted a great deal of attention and money to the improvement of these waterways, but so far there has been a missing link which was of vital importance to supply. It is not sufficient merely to provide a waterway. It is equally important to provide the means for an interchange of traffic between the waterway and other means of transportation. I have been tremendously interested ever since I came into the Railroad Administration in seeing how we could make a practical, sympathetic and helpful experiment with a view not only to furnishing the desire to have the railroad feed the waterway so as to get a really economical and beneficial use of the waterway, but with a view also to finding a practical method of effecting this rehandling of the traffic between the railroad and the waterway so as to get a really economical result. The Railroad Administration has attempted to do that, and I am directing that work with a definite belief and conviction that with these great national waterways we can and must find a way to make them an economic success." But, he said, this will take time, and if the administration is facing a relinquishment of the railroads in a short time, it will be hampered in working out the problem of waterway development. Mr. Hines said nobody expects the present form of federal control to continue indefinitely, and he did not suppose that anybody wants it to continue indefinitely.

Discussion of railroad questions occupied a considerable part of the program of the meeting. Secretary of the Navy Daniels said that the railroads had broken down under their increased burden after the United States entered the war, "while the waters have run idly to the sea," and that they had broken down because they were built on a program based on the destruction of water traffic. He declared that not a ton of the raw materials which lend themselves to water transportation should be carried by rail if water transportation was available. Senator Ransdell of Louisiana, president of the National Rivers and Harbors Congress, urged the appointment to the President's cabinet of a secretary of transportation whose duty would be to regulate railway, waterway and highway transportation. Major General William M. Black, chief of engineers, United States Army, also urged the creation of a secretary of transportation, charged with the development and co-ordination of all the transportation agencies of the nation. He said the Railroad Administration is a railroad administration with a waterway appendix because its officials are almost all men trained in the railroad viewpoint.

The question of government ownership versus private ownership of the railways was discussed by Luther M. Walter, general counsel for the National Association of Owners of Railroad Securities, who opposed both government ownership and the proposed extension of federal control, and advocated the plan for railroad regulation proposed by that association before the Senate committee; by William Jennings Bryan, who advocated a dual plan of state ownership of branch lines and federal ownership of trunk lines of railroad; and by Samuel O. Dunn, editor of the *Railway Age*, who declared that private operation under wise and fair regulation would be far more beneficial to the public than the result of government operation would be.

The Traffic Club of St. Louis, Mo., recently adopted resolutions declaring that the extension of government control of railroads is prejudicial to public interest. The resolutions were ordered sent to Missouri representatives in Congress.



The Station from Broad Street

A New Passenger Station Completed at Richmond, Va.

This Project Involves a Terminal With Facilities for Two Roads and an Improved Main Line

THE OLD UNION PASSENGER STATION facilities in Richmond, used jointly by the Atlantic Coast Line and the Richmond, Fredericksburg & Potomac, having become inadequate and incapable of expansion to meet present day requirements, the Richmond Terminal Railway was organized early in 1916 for the purpose of providing an im-

proved and modern passenger layout for the use of these two railroads. The project embraces a new station and auxiliary buildings, a complete and interesting terminal track layout and the development of an improved main line through the city for passenger traffic which eliminates the objectionable operating features of the old line and numerous crossings at grade with important thoroughfares and lengthwise occupancies of other streets. The contracts for the terminal construction were let early in 1916 and the new terminal was opened to traffic on January 4 of this year.



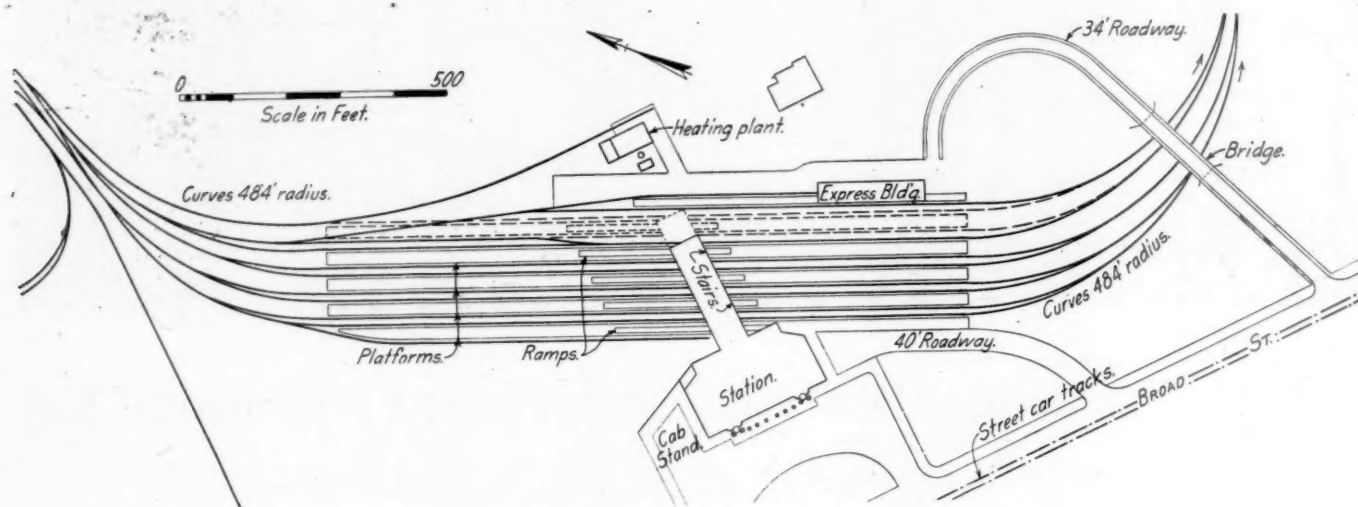
Map of Richmond Showing the New Station Site in Relation to the Old Station

proved and modern passenger layout for the use of these two railroads. The project embraces a new station and auxiliary buildings, a complete and interesting terminal track layout and the development of an improved main line

As may be seen on the map of Richmond, the old facilities for passenger service were situated at Byrd street in the heart of the business section of the city on the lower level along the James river. The land available for railway purposes

in this district is limited on the south by the James river and on the north by the abrupt rise from the low ground along the river to the higher level of the city. The property adjoining the site is built up solidly with industrial and business plants, making the acquisition of additional property for railway purposes difficult and expensive, even if the location was desirable otherwise, which was not the case. The old station, while serving as a through station, was of the stub-end type, constructed in this manner because of the

Potomac and the tracks of the Petersburg Connecting Company, which operates between Byrd street and Elba stations. In this section and north to Broad street the single track lies in and across important thoroughfares, an arrangement which is unsatisfactory both to the city and to the railroads. These objectionable features, coupled with the urgent necessity for amplified freight facilities on the lower level of the city with the area now occupied by the passenger layout necessary to the development of the freight project, led to the



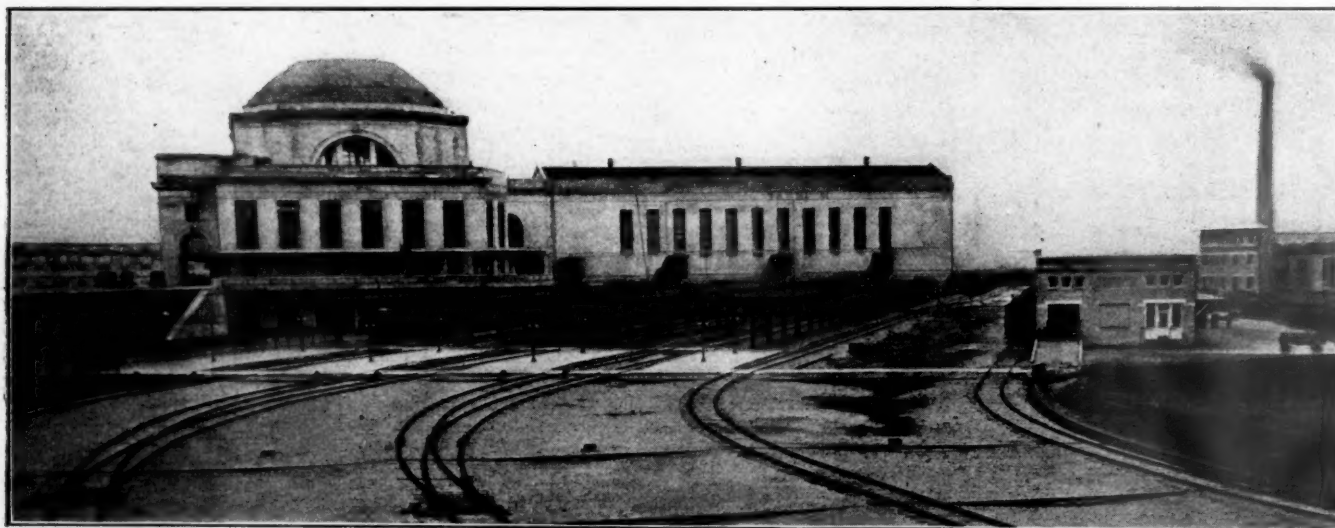
Track Layout at the Station

limitations of the site. It was served with six stub-end station tracks, each having a capacity for six cars only, the limited track capacity being also occasioned by the topographical features of the location.

Because of its type, reverse movements were necessary in getting trains in and out of the old station, and as the through trains using the terminal often carried 16 to 18 cars, two cuts were necessary in getting one train into the station. This, of

decision to locate the new terminal in a different section of the city.

The location chosen is in the western end of the city in a rapidly growing residential section on land purchased some years ago by the Richmond, Fredericksburg & Potomac. This site is convenient to the hotels and retail section of the city, thus fulfilling the needs of the transient public, and is particularly convenient to the newer residential sections.



The Track Layout and Platforms

course, required a liberal time allowance in the schedule for the station stop, and in the event of trains arriving at the station off their schedule and on the time of other trains, delays and congestion resulted.

The approaches to the old site also embrace objectionable features. From the south the approach is over the Atlantic Coast Line's single track bridge over the James river, while from the north it is via the Richmond, Fredericksburg &

To utilize this site as a terminal it was necessary to develop a new line for passenger traffic.

The New Passenger Line

Again referring to the map of Richmond it may be seen that the old through passenger line entering Richmond from the south embraces the Atlantic Coast Line main tracks over the James river into the old station and those of the

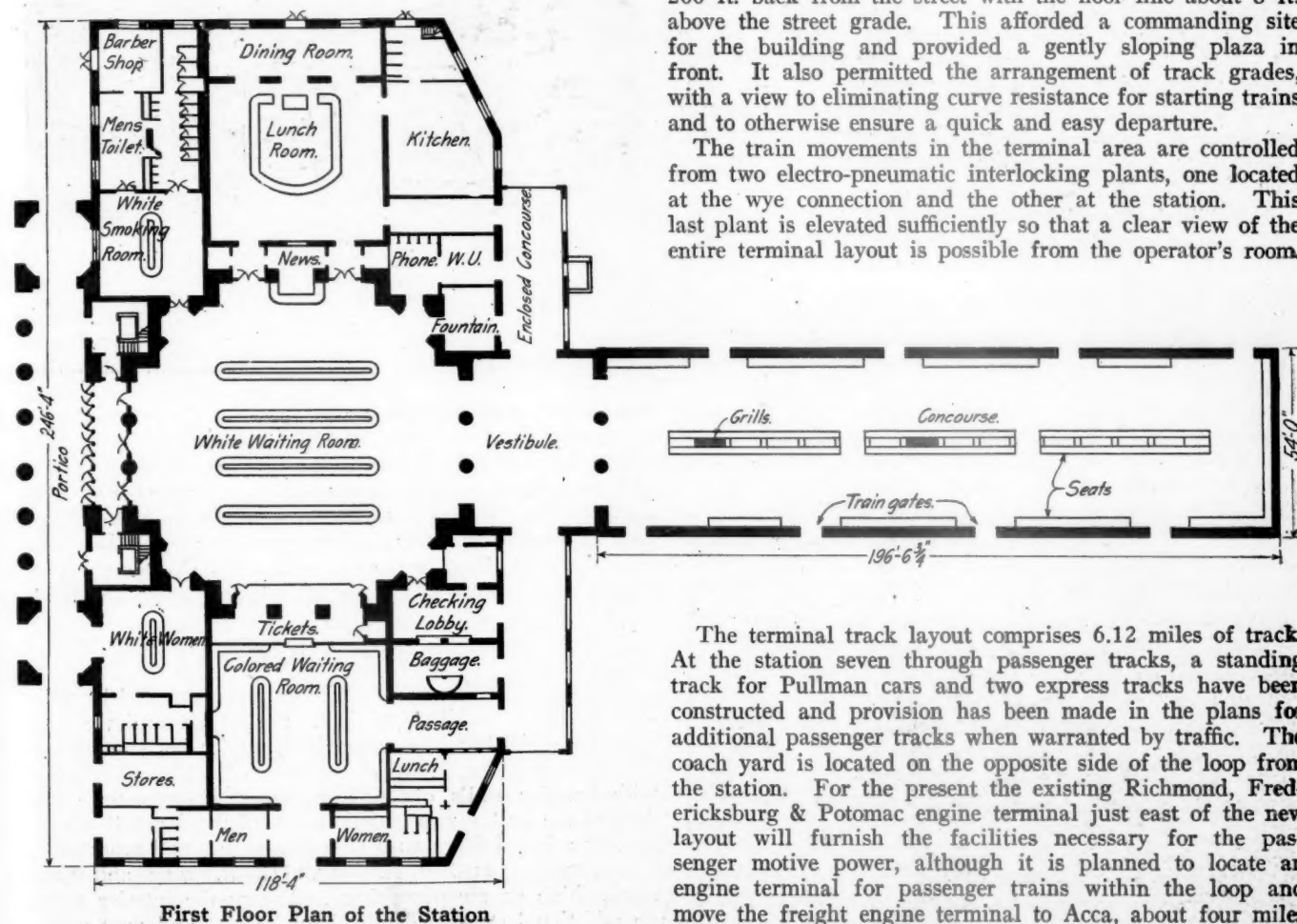
Petersburg Connecting Company and the Richmond, Fredericksburg & Potomac to the north leaving the city on the west. For freight purposes a single-track line had previously been provided around the south and west of the city, leaving the Atlantic Coast Line main line at a point about two miles south of the old station and joining with the Richmond, Fredericksburg & Potomac main line at the point where those tracks leave the city. Under the new plan through passenger trains will follow this route and, incident to the terminal project, this belt line has been double-tracked and otherwise improved. The Atlantic Coast Line main line into the old station will be operated only for freight service.

The new terminal layout is located approximately one-half mile east of the junction of the Richmond, Fredericksburg & Potomac main line with the belt line. Between this

Trains from the south approach the station over the northbound main track of the belt line and the wye track shown on the map, entering the station layout from the west. Southbound trains enter the station from the same end by means of a second approach track leading off the Richmond, Fredericksburg & Potomac main line. All trains will leave the station from the east, passing around the loop. The movement of northbound trains is direct, and southbound trains will use the second track of the wye connection mentioned above to reach the southbound main track of the belt line. From the foregoing it will be noted that all trains enter the station headed in the same direction—east. Thus baggage will be handled at one end of the platforms only.

In planning the layout the platforms and tracks were located at an angle with Broad street. The station was placed 200 ft. back from the street with the floor line about 8 ft. above the street grade. This afforded a commanding site for the building and provided a gently sloping plaza in front. It also permitted the arrangement of track grades, with a view to eliminating curve resistance for starting trains and to otherwise ensure a quick and easy departure.

The train movements in the terminal area are controlled from two electro-pneumatic interlocking plants, one located at the wye connection and the other at the station. This last plant is elevated sufficiently so that a clear view of the entire terminal layout is possible from the operator's room.



First Floor Plan of the Station

junction and the new location two of the tracks of the Richmond, Fredericksburg & Potomac main line will be utilized as a part of the new passenger line, there being five tracks between these points. That portion of the Richmond, Fredericksburg & Potomac main line east of the new layout will be abandoned as main line, but retained in service to reach the existing engine terminal, yard facilities and industries just east of the new terminal, while between Broad street and the old Byrd street station the line will be abandoned entirely, thus doing away with the occupancy of the city streets by the passenger track.

While the new station facilities are located outside of and are comparatively remote from the new traffic line, the station track layout is so planned that reverse movements are eliminated. The tracks are arranged in a loop, as shown in the map of the station grounds on which the direction of traffic is indicated by means of arrows.

The terminal track layout comprises 6.12 miles of track. At the station seven through passenger tracks, a standing track for Pullman cars and two express tracks have been constructed and provision has been made in the plans for additional passenger tracks when warranted by traffic. The coach yard is located on the opposite side of the loop from the station. For the present the existing Richmond, Fredericksburg & Potomac engine terminal just east of the new layout will furnish the facilities necessary for the passenger motive power, although it is planned to locate an engine terminal for passenger trains within the loop and move the freight engine terminal to Acca, about four miles to the north on the main line of the Richmond, Fredericksburg & Potomac.

Curves with a radius of 484 ft. have been installed at both ends of the loop. This is the maximum curvature in the layout, the curve at the west end of the main line having a radius of 1,194 ft.

The track layout includes 52 frogs, 44 in the main line and 8 in the coach yard. In the main line the frogs are of the manganese insert type and in the coach yard of bolted open-hearth construction. The frogs in the main line are all special, ranging from No. 8 to No. 15 and, in spite of the difficulty of design occasioned by the curves, only six types were used, thus effecting material savings in manufacturing costs.

The natural surface of the ground at the layout is generally higher than the track grades established and 150,000 cu. yd. of material was moved in the preparation of the site of which 145,000 cu. yd. was occasioned by the depres-

sion of the tracks and 5,000 cu. yd. by the station building excavation. About 40,000 cu. yd. of the material was utilized in the fill required in the station plaza and the remainder in filling the low ground at the connection with the Richmond, Fredericksburg & Potomac main line at the north end of the loop. This last embankment was placed in such a manner that a complete loop track can be constructed without further grading.

The material moved in these operations was chiefly clay with gravel pockets in places. In making the excavation the top soil was stripped by teams and piled for use in the parking scheme. All of the excavation except 25,000 cu. yd. removed by teams was handled by a steam shovel and moved to place in the fills by means of narrow-gage equipment. The embankment for the plaza in front of the station was also placed by teams.

The presence of gravel pockets in the clay made necessary an elaborate system of sewers. The main sewers of the plot which connect with the city sewers are all of brick and include 584 ft. of 4-ft. 6-in. sewer; 1,000 ft. of 3-ft. 6-in. sewer, and 500 ft. of 3-ft. sewer. The lateral sewers range from 8-in. terra cotta to 24-in. These are specially built to collect the surface water, the back filling in the trenches being of coarse material.

In planning the improvement one of the important objectives has been to secure pleasing surroundings and the plan of landscape treatment is of particular interest. The greater portion of the site was formerly the location of the Hermitage golf grounds and a baseball park, free from extensive building improvements, a site which lent itself readily to landscape treatment. Because of the large area occupied simple methods of treatment in the landscape plan were essential. It is proposed to establish and maintain fine turf on the oval in front of the station and between Broad street and the entrance roads to the right and left. The oval area will be left in simple lawn, because it seems most de-

simple turf, is surrounded by flowering shrubs in which dogwoods and redbuds predominate.

The semi-circular loop which extends from the overhead express road bridge down to the express building is a simple shrub flower garden. The level ground is turfed. Back of this will be a belt of winter or yellow jesamine, redbuds, dogwoods and other flowering shrubs with certain hardy perennials, giving a succession of bloom through much of the season. The embankment approaches to the bridge over the tracks are covered with Armour privet which in this climate is practically evergreen.

The great central part of the loop, formerly used as golf



The Train Shed and Platforms

grounds, is already in good grass and the extensive rough ground area in the northern part of the loop is covered with a dense planting of black locust, edged around with flowering shrubs of great variety, which will require no maintenance and will produce a striking effect.

All of the railway banks and the slopes of the cuts, which are very flat, are thickly planted with Japanese honeysuckle and Armour privet, forming a mass covering, requiring little attention and being practically evergreen. Lombardy poplars are planted in clumps or rows in many places to screen off factory buildings in the near and middle distance. This landscape work was done by Warren H. Manning, landscape designer, of Boston, Mass.

The Station

The plans for the station building were prepared by John Russell Pope, architect, of New York City, and the construction work has been carried out under his supervision. The building is a fireproof structure of steel and concrete with exterior walls of Indiana travertine limestone. The face of the building is 200 ft. north of the street line, permitting a broad plaza with sweeping curves and grass plots. The structure is 240 ft. long, 118 ft. wide and three stories high on the plaza front. Facing the interior courts an additional story is obtained in the east and west wings. These three upper floors are used for railroad business offices.

The entire main floor is given over to the uses of the traveling public. The waiting room for white people, with its lofty domed ceiling extending up entirely through the building, occupies all the space included within the central motif. The concourse, 50 ft. wide and over 200 ft. long, joins the domed waiting room through the concourse vestibule on the north, extending at the same level as the waiting room over the seven tracks. The concourse vestibule is 50 ft. by 50 ft. in plan. Access to the tracks is obtained through enclosed stairways on the east for outgoing, and ramps on the west for incoming passengers. The platforms are covered by canopies that extend far over the cars and are supported by single Ionic columns of cast iron and of massive proportions. The ramps, stairs and platforms are in harmony with the central structure. Enclosed passages flank the building on the northeast and northwest, giving



The Lunch Room and Restaurant

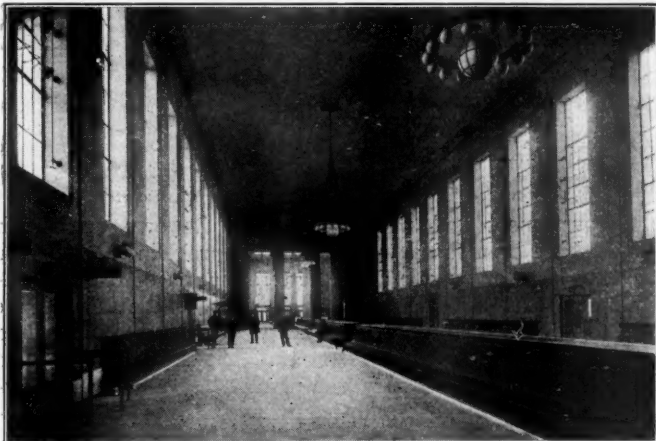
sirable to have a simple green foreground for the building, that will not be broken by beds of flowers and shrubs. The turf areas to the right and left of the entrance road are to be bordered with flowering shrubs such as spraeas, wigelias, altheas, golden bell, and the like, faced down with borders of hardy perennials.

To the north of the station a sloping triangular area, that is above the cut slopes at the railroad tracks, will be covered with ground-cover plants including Japanese honeysuckle, Japanese bittersweet and Chinese wisteria. To the south of the station between the tracks and the express and baggage road, the comparatively level ground covered by

direct access to the concourse from the cab stand on the west and the plaza and colored section on the east.

The main entrance to the station faces Broad street and consists of two groups of seven doors each, leading from the portico through the vestibule directly into the waiting room for white people. The vestibule is planked by two entrance hallways, also opening from the portico, served by two doors each. Stairways and elevators run from each of these hallways to the office floors above.

The plan of the main floor and concourse is of particular interest. Entering the waiting room through the portico and vestibule, outbound passengers must keep to the right to reach the information bureau, the ticket office and the baggage checking room. These facilities are reached in the



Interior of the Concourse

trip to the concourse in the sequence mentioned and are arranged in a straight line, allowing the passenger to reach his objective in the minimum time. On the left in the west wing are the smoking room, men's toilet and barber shop, followed by the restaurant, lunch room, telephone and telegraph offices and soda fountain. The rest room and toilet for women are on the right of the main waiting room. A large portion of the main floor of the east wing is given over to the waiting room, restaurant, rest room and toilets for colored people. Their entrance is from the east passage to the concourse.

The ticket office and baggage checking rooms separate the white and colored waiting rooms, thus permitting both sections to be served by the same respective offices. At the extreme southeast corner of the main floor are two shops for rental purposes.

The baggage is handled on the basement floor of the station, with a separate drive from Broad street. A spiral chute and elevator for hand baggage extend between the main baggage room and the checking room on the main floor. The baggage trucking platform is independent of the platforms used by passengers, and, as the traffic through the station is all in one direction, the greater part of the trucking will also be in one direction. Cross-overs are provided from the baggage platform to the passenger platform.

The basement level will also provide space for a United States mail room, a rest room for trainmen and conductors, the office of the station master, storage for the restaurant and other auxiliary facilities. The mechanical room contains the main electrical switchboard, ventilating apparatus, and a refrigerating machine for cooling the drinking water circulated throughout the building.

In design, both the exterior and interior are simple and dignified. Classic architectural orders, the Doric outside and Ionic inside have been used. These have simple moulding and almost no ornaments. The only exception is the

carved setting for the tower clock in the front pediment, typifying progress and industry, and the two seals. The latter are also used again in a modified form on the walls of the concourse.

Plain coursed limestone walls and Napoleon gray marble wainscoting are used in the white waiting room and concourse. All other rooms on the main floor have wainscoting of gray Tennessee marble and plaster walls. The latter are tinted in pleasing tones of gray.

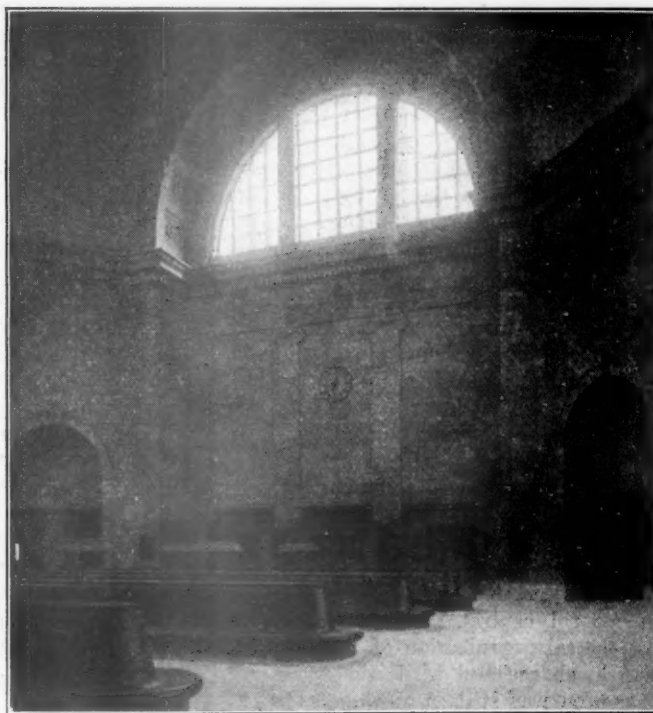
The ticket grills and all other interior metal work are a soft greenish gray, harmonizing with the walls and wainscoting. All floors are of marble terrazzo with marble slab borders.

A feature of special interest is the great illuminated sphere representing the world. It is suspended from the center of the domed ceiling of the main waiting room, and supported within a double ring ornamented with the signs of the zodiac. The entire fixture is made of wrought metal and glass and is eight feet in diameter.

Auxiliary Facilities

The express building, which is 40 ft. wide and 200 ft. long, is located across the tracks from the station. This is served by two tracks, one through and the other stub, separated by a platform 12 ft. wide and 350 ft. long. A ramp platform is provided east of the building.

The road leading to the building, which is 34 ft. wide,



A Corner of the Waiting Room

widens into a 40-ft. driveway at the house. This drive leads off of Broad street east of the station and is carried over the track layout by means of a reinforced concrete bridge in the design of which special attention was given to the appearance of the structure in order that it might harmonize with the surroundings.

The express building is of brick on a concrete foundation with seven doors on the driveway side and 14 on the track side. Wilson steel rolling doors are provided throughout. The platform is protected by a canopy and the drive is sheltered by the overhanging roof. The office is 15 ft. by 19 ft. with toilet facilities located in the south end of the building. With the exception of provision for these fa-

cilities the entire building is free from partitions. Two Howe scales, one 7 ft. by 9 ft., of 5,000-lb. capacity, and one 4 ft. by 5 ft., of 500-lb. capacity, are provided.

The heating plant, which adjoins the express facilities, is a two-story building 40 ft. wide by 90 ft. long with space provided on the second floor for lockers and other facilities for the mechanics. The brick stack for this plant, which was built by the Alphons Custodis Chimney Construction Company, is 11 ft. 3 in. in outside diameter at the bottom, 5 ft. inside and 110 ft. high. It is supported on a concrete base 4 ft. deep, octagonal in shape and 18 ft. 6 in. in di-

ameter. The foundation rests on twenty-four 15-ft. Raymond concrete piles which were driven with a steam hammer.

The remaining buildings in the layout in addition to the interlocking plants previously mentioned, are the supply, the oil and the ice house. These are located adjacent to the coach yard tracks.

The plans for the improvements were made by Harry Frazier, consulting engineer, of Richmond, Va., who was also in general charge of the work. C. C. Strong was the resident engineer. The J. H. Parker Company, of New York, was the contractor for the main building.

Doings of the United States Railroad Administration

Director General Has Meeting With Executives to Discuss Senate Hearings and Other Matters

THE POSSIBILITY of facilitating the return of the railroads to private management by turning over their operation to the railroad corporations as agents or representatives of the government for a short period prior to the actual termination of federal control was discussed by Director General Hines at a meeting of the Association of Railway Executives at Washington on February 7, which was attended by about 75 railway executives. The meeting was called for the purpose of giving the executives an opportunity to discuss among themselves the progress of various plans for remedial railroad legislation which have been presented before the Senate Committee on Interstate Commerce and also for the purpose of discussing with Mr. Hines various questions relating to the relations between the Railroad Administration and the railroad companies. The plan of making the corporations the agents of the government as they were during the first three or four months of federal control before federal managers were appointed was discussed only tentatively, but it has been considered by many who have considered the problem as a practical way of effecting the transition from federal control to private management, in the event the President decides to relinquish control at an early date, as he has said he would do if no prospect for early legislation on a permanent plan appeared, and as Director General Hines has said he would recommend. This would give the corporations an opportunity to reinstate their organizations, so that they would be in a position to resume management on their own account at the termination of federal control. The transition would be made while the central organization of the Railroad Administration was still in charge and while the government guarantee of compensation was still in effect.

Mr. Hines was questioned as to what period of time he contemplated in saying that the railroads must be returned in a reasonable time unless the five-year extension is approved by Congress. Mr. Hines said he had no definite period in mind, but that it would be his idea to recognize the conditions existing in the railroad business and allow sufficient time and give sufficient notice to enable the changes to be made in an orderly manner.

Another subject discussed was the position of the Railroad Administration regarding the allocation of cars and locomotives. Mr. Hines took the position that there would have been less objection to accepting the standard equipment if the war had not terminated so suddenly, but pointed out that it was ordered at a time when everyone expected the war to continue longer than it did. He said the railroad control act provided two ways of purchasing equipment, but that if

the government had purchased it for its own account it would have been faced with a difficult problem in disposing of it by lease or by sale after the termination of federal control. He said the railroad companies would probably have had to buy about the same amount of equipment if they had been in charge of the railroads and that the administration felt it was fully justified in the plan it had adopted of purchasing the equipment and requiring the companies to accept and pay for it at its cost to the government.

WASHINGTON, D. C.

Report of Exports Control Committee

Considerable improvement in the movement of overseas traffic for the week ended February 4 over the previous week is shown in a report of the Exports Control Committee. There were 9,180 cars of export freight received at North Atlantic ports for the week and 10,131 cars delivered to boats. The total number of cars on hand at North Atlantic ports on February 4 was 32,343, while for January 28 there were 38,201, a decrease in accumulations of 988 cars.

Commercial export freight is moving freely to New York, the steamship lines displaying a desire to get cargo as fast as possible. Further space in British vessels will soon be available for commercial cargo. Permits are being granted covering commercial freight to Newport News to meet steamers due this month. The total commercial freight on hand for the week ending January 30 at North Atlantic ports increased 12,500 tons. There was a decrease of 2,800 tons at South Atlantic ports; an increase at Gulf ports of 2,600 tons making a gross increase of commercial freight on hand at all ports of 12,300 tons over the previous week.

Effective on March 1 the Exports Control Committee will be abolished, but part of its work, including the development and co-ordination of export traffic, will be continued under the direction of C. E. Spens, who has been appointed assistant director of the Division of Traffic, in charge of export and import traffic matters.

Bill for \$750,000,000 Appropriation to Be Reported

The Appropriations Committee of the House expects to report within a few days a bill for the appropriation of an additional \$750,000,000 for the revolving fund of the Railroad Administration asked for by Director General Hines. Whether it will be reported as a separate bill or as a rider to a general appropriation bill has not yet been decided. Director General Hines has held several conferences with a subcommittee of the appropriations committee, explaining the reasons why it is needed and fortifying them with material for use in case opposition develops on the floor of the

House or in the Senate later. Some Congressmen are known to hold the opinion that the amount asked is too much, while others who are opposed to the Railroad Administration might seek to oppose it as a means of embarrassing the administration, but the general feeling seems to be that the amount will be granted.

Freight Traffic Movement for 1918

The Operating Statistics Section of the Railroad Administration has issued a report covering freight train and car performance for December and the calendar year 1918, some of the figures of which were briefly noted in last week's issue. Net ton miles of freight handled for the year amounted to 434,997,928,000, an increase of 1.8 per cent as compared with 1917. By heavier loading this traffic was handled with a decrease in train miles and car miles but the average number of freight cars on lines shows an

increase of 2.9 per cent and the mileage per car per day decreased from 26.1 to 24.9, while the net ton miles per car day show a decrease from 495 to 490, or 1 per cent. The percentage of serviceable cars was 5.7 in 1918 as compared with 5.6 in 1917. The average tonnage per car increased from 27 to 29.1 or 7.8 per cent, but the tonnage per train was increased from 653 to 682, or only 4.4 per cent. The figures by regions are given below.

Salaries to Be Reported

Accounting Circular No. 71 directs federal auditors to prepare and submit a statement showing the names and salaries at January 31, 1919, of the below designated officers who exercise jurisdiction on the reporting railroad: Federal or general manager, principal assistant to the federal or general manager, federal auditor, federal treasurer, officer in charge of traffic department. If any of the above classes of

Freight Traffic Movement and Car Performance

(INCLUDING FREIGHT AND MIXED TRAINS)

TWELVE MONTHS ENDED DECEMBER 31, 1918, COMPARED WITH PREVIOUS YEAR

Region	Average miles of road operated		Net ton miles Revenue and non-revenue (Thousands)			Net ton miles per mile of road per day			Train miles (Thousands)			Net ton miles per train mile		
	This year	Last year	This year	Last year	Per cent change	This year	Last year	Per cent change	This year	Last year	Per cent change	This year	Last year	Per cent change
Total, New England District....	8,029	8,020	11,335,694	10,678,807	6.2	3,869	3,650	26,285	26,683	d 1.5	431	400	7.8	
Total, Central District	21,270	21,337	77,030,930	74,343,598	3.6	9,925	9,553	92,887	95,890	d 3.1	829	775	7.0	
Total, Ohio-Indiana District§ ...	13,181	13,187	40,081,126	40,579,743	d 1.2	8,331	8,431	52,406	55,678	d 5.9	765	729	4.9	
Total, Eastern Region§	42,480	42,544	128,447,750	126,602,148	2.3	8,284	8,088	171,578	178,251	d 3.7	749	705	6.2	
Total, Allegheny Region§	13,915	13,988	65,969,467	67,004,485	d 1.5	12,987	13,090	74,112	77,829	d 4.8	890	861	3.4	
Total, Pocahontas Region	4,922	4,950	26,166,344	26,291,023	d 0.5	14,564	14,852	22,822	23,151	d 1.4	1,147	1,136	1.0	
Total, Southern Region	37,406	37,355	51,335,131	47,960,424	7.0	3,764	3,518	100,791	95,918	5.1	509	500	1.8	
Total, Northwestern Region ...	46,936	46,800	60,352,804	58,900,071	2.5	3,823	3,449	91,605	94,503	d 3.1	659	623	5.8	
Total, Central Western Region..	51,257	51,175	73,531,399	71,718,754	2.5	3,931	3,840	118,686	123,825	d 4.2	620	579	7.1	
Total, Southwestern Region	31,813	31,921	29,195,033	29,865,019	d 2.2	2,514	2,563	58,330	61,103	d 4.5	501	489	2.5	
Grand total, all regions.....	228,729	228,633	434,997,928	427,341,924	1.8	5,210	5,121	637,924	654,580	d 2.5	682	653	4.4	

Region	Loaded			Empty			Total		
	This year	Last year	Per cent change	This year	Last year	Per cent change	This year	Last year	Per cent change
Total, New England District....	479,212	514,891	d 6.9	203,136	202,110	0.5	682,348	717,001	d 4.8
Total, Central District	2,651,606	2,798,852	d 5.3	1,288,518	1,197,576	7.6	3,939,924	3,996,428	d 1.4
Total, Ohio-Indiana District§ ...	1,254,741	1,375,990	d 8.8	594,021	563,665	5.4	1,848,762	1,939,655	d 4.7
Total, Eastern Region§	4,385,559	4,689,733	d 6.5	2,085,475	1,963,351	6.2	6,471,034	6,653,084	d 2.7
Total, Allegheny Region§	1,835,678	1,973,283	d 7.0	1,009,074	984,060	2.5	2,844,752	2,957,343	d 3.8
Total, Pocahontas Region	650,725	683,191	d 4.8	439,613	405,820	8.3	1,090,340	1,089,011	0.1
Total, Southern Region	1,993,810	1,995,917	d 0.1	914,786	832,748	9.9	2,908,596	2,828,665	2.8
Total, Northwestern Region ...	2,187,170	2,280,420	d 4.1	939,211	867,383	8.3	3,126,381	3,147,803	d 0.7
Total, Central Western Region..	2,708,856	2,904,234	d 6.7	1,241,166	1,175,872	5.6	3,950,022	4,080,106	d 3.2
Total, Southwestern Region	1,166,505	1,288,823	d 9.5	498,699	487,672	2.3	1,665,204	1,776,495	d 6.3
Grand total, all regions.....	14,928,303	15,815,601	d 5.6	7,128,026	6,716,906	6.1	22,056,329	22,532,507	d 2.1

Region	Average number of freight cars on line daily										Net ton miles per loaded car mile	Per cent loaded to total car miles			Car miles per car day			Net ton miles per car day			
	Serviceable		Total			Per cent Uns'v'ble			This year	Last year		Per cent change	This year	Last year	Per cent change	This year	Last year	Per cent change	This year	Last year	Per cent change
	This year	Last year	This year	Last year	Per cent change	This year	Last year	Per cent change													
Total, New England District...	98,470	103,317	194,004	109,026	d 4.6	5.3	5.2	23.7	20.7	14.5	70.2	71.8	d 2.2	18.0	18.0	...	299	268	11.6		
Total, Central District	413,115	421,749	437,586	446,865	d 2.1	5.6	5.6	29.1	26.6	9.4	67.3	70.0	d 3.9	24.7	24.5	0.8	482	456	5.7		
Total, Ohio-Indiana District§ ...	211,317	223,069	230,312	240,922	d 4.4	8.2	7.4	31.9	29.5	8.1	67.9	70.9	d 4.2	22.0	22.1	d 0.5	477	461	3.5		
Total, Eastern Region§	722,902	748,135	771,902	796,813	d 3.1	6.3	6.1	29.3	26.8	9.3	67.8	70.5	d 3.8	23.0	22.9	0.4	456	432	5.6		
Total, Allegheny Region§	399,594	388,213	426,341	408,476	4.4	6.3	5.0	35.9	34.0	5.6	64.5	66.7	d 3.3	18.3	19.8	d 7.6	424	449	d 5.6		
Total, Pocahontas Region	84,722	78,795	88,776	82,887	7.1	4.6	4.9	40.2	38.5	4.4	59.7	62.7	d 4.8	33.6	36.0	d 6.7	808	869	d 7.0		
Total, Southern Region	274,130	229,575	287,740	242,233	18.8	4.7	5.2	25.7	24.0	7.1	68.5	70.6	d 3.0	27.7	32.0	d 13.4	489	542	d 9.8		
Total, Northwestern Region ...	315,509	316,883	336,436	337,437	d 0.3	6.2	6.1	27.6	25.8	7.0	70.0	72.4	d 3.3	25.5	25.6	d 0.4	491	478	2.7		
Total, Central Western Region..	318,129	E 302,165	336,192	320,865	4.8	5.4	5.8	27.1	24.7	9.7	68.6	71.2	d 3.7	32.2	34.8	d 7.5	599	612	d 2.1		
Total, Southwestern Region	176,811	166,291	183,399	174,598	2.9	3.6	4.8	25.0	23.2	7.8	70.1	72.5	d 3.3	24.9	27.9	d 10.8	436	469	d 7.0		
Grand total, all regions.....	2,291,797	E 2,230,057	2,430,786	2,363,309	2.9	5.7	5.6	29.1	27.0	7.8	67.7	70.2	d 3.6	24.9	26.1	d 4.6	490	495	d 1.0		

d Indicate decreases.

a Less than one-tenth of one per cent.

E Estimated.

t Information incomplete.

x Report note received.

§ B. & O., Western Lines, Pennsylvania Western Lines, and P. C. C. & St. L. included in Ohio-Indiana District.

The following roads come under the jurisdiction of two regional directors although included only in one region in this statement:

Road	Region in which included	Other regional director having jurisdiction
Baltimore & Ohio.....	Allegheny	Southern.
Chicago, Rock Island & Pacific.....	Central Western	Southern.
Illinois Central	Southern	Central Western.
Toledo, Peoria & Western.....	Central Western	Eastern.
Southern Pacific (Pacific System)....	Central Western	Northwestern.
Wabash	Eastern	Central Western.

officers are also engaged in directing departments of other railroads and are not carried on the payroll of the respondent that fact should also be stated.

Locomotive and Car Deliveries in 1918

According to figures made public by Director General Hines, there were 2,622 locomotives shipped to railroads under federal control during the year ended December 31, 1918. Of this number, 744 were constructed under orders of the Railroad Administration, while 1,410 were contracted for prior to government operation. In the total were 200 Russian decapods, constructed for the Russian government, but never delivered owing to the situation which arose in that country. Of the total number of locomotives delivered during the calendar year 1918, 540 were assigned to the Allegheny region, 375 to the Central Western region, 902 to the Eastern region, 236 to the Northwestern region, 105 to the Pocahontas region, 361 to the Southern region, and 103 to the Southwestern region.

For the calendar year 1918 there were 700 passenger cars delivered to Class I railroads, while for the same period 40,850 freight cars were delivered. Of the freight cars built during the year 15,230 were U. S. R. A. standard cars. Of the total number of freight cars delivered, 8,683 were built in railroad shops.

Piece-Work Being Abolished

In addition to the roads mentioned in last week's issue on which the piece work system is being abolished by vote of the employees it has been decided to discontinue piece work in the shops of the Michigan Central, Lehigh Valley, Erie, Chesapeake & Ohio, and Central of New Jersey. The Railroad Administration is following a policy of reducing the shop hours at many places where there is a surplus of labor in preference to laying off men, and the Pennsylvania shops at Harrisburg and Altoona, and shops on the Baltimore & Ohio, Hocking Valley and other roads in the Eastern region have been placed on a 40-hour a week basis. While the number of employees has been reduced at various shops on many roads, there is still a shortage of men on a large number of roads, and efforts are being made to transfer men from places where there is a surplus to where there is a demand for them. It is stated that places are being made for all returning soldiers and that in some cases they are replacing inexperienced men who were employed during the war.

Not in Position to Finance Extensive Improvements

Director General Hines explained the attitude of the Railroad Administration toward railroad improvements involving large capital expenditures at a conference at Washington on February 8 with a group of Chicago aldermen and business men who had called upon him to urge the importance of the immediate carrying on of railroad improvements in the city of Chicago outside of those involved in the Union Station project, which have already been provided for. Mr. Hines said he did not think there is anything in the country of greater importance at this time than to resume the improvement work which was held up by the war. Not only do the public need the improvements, but it is of the highest importance to give labor the employment, he said. The Railroad Administration will do everything in its power to co-operate in promoting that policy, but when it comes to what the Railroad Administration can do it is confronted with uncertainty. If there is no extension of federal control anything the administration plans for the railroads could not be carried out because there would be a change of management before the plans could be carried out. But the Railroad Administration, even in the face of that uncertain situation can and will use whatever moral suasion it can to get the railroad corporations to consent to going ahead with improvements, and whenever it can finance the work it will be glad to go ahead with it. But, in the face of the uncertainty,

the government is not in position to enter upon an extensive program of financing itself. Mr. Hines took advantage of the occasion to urge upon his callers the argument for a five-year extension in order to enable the Railroad Administration to take the initiative in a confident way in such matters.

* * *

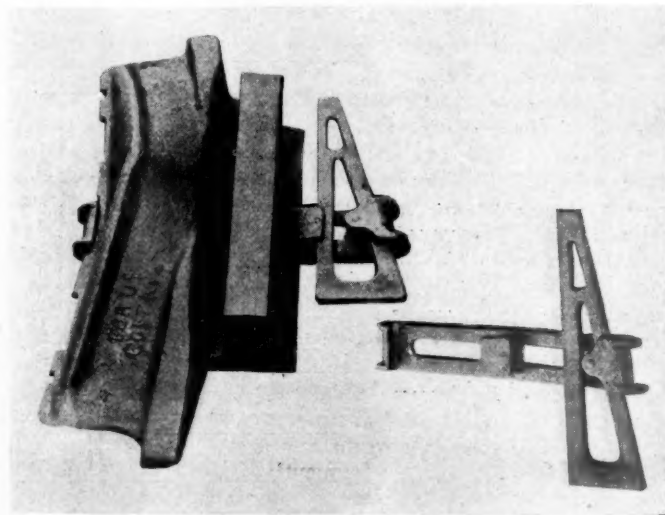
The Car Service Section in Circular CS-53 has issued the following instructions: When the terms of Division of Operation Circular 20 or Revisions thereof, movement of freight equipment to the home road is requested by proper mechanical department officer such equipment shall be promptly billed and moved to owners via direct routes. The full routing, including junctions, must be shown, billing to carry the following notation: "Billed via short route. Authority Division of Operation Circular 20, revised, and Car Service Section Circular CS-53. Not to be diverted." The originating line will be held responsible for proper short routing via Federal controlled roads.

* * *

Director-General Hines has instructed the regional directors that a la carte dining car service may be resumed March 1, when it can be done without congestion in dining cars. Where table d'hote service is continued the price is to be \$1.25 and the meals are to be worth the price.

An Attachment for Car Replacers

ALL OPERATING MEN are familiar with the difficulties experienced in holding a car replacer in position while endeavoring to return derailed wheels to the track, and various means have been suggested for eliminating the necessity for spiking the replacer to the tie, as this is a



The Replacer Clamp in Position and Detached

rather difficult and time-consuming operation when attempted underneath a car. The photograph shows the latest development for overcoming this difficulty with a clamp to hold the replacer against the rail by means of a wedge. This device consists essentially of a long slotted bar with a grip on each end, a perpendicular one on one end to take hold of the replacer and a beveled one at the other end to engage the wedge. A movable block is free to slide back and forth in the slot and is used as a filler between the rail flange and the inner side of the wedge. A rivet passing through the large opening in the center of the wedge, keeps it from becoming detached and lost when not in use and offers no interference with the tightening or loosening of the wedge. This device is manufactured by the Reading Specialties Company, Reading, Pa.

Railway Business Association's Recommendations

Conditions for Transportation Progress—Centralization of Authority and Responsibility—Independent Railroads

THE COMMITTEE ON RAILWAYS AFTER THE WAR of the Railway Business Association, of which W. W. Salmon, president of the Railway Signal Company, is chairman, has filed with the Committee on Interstate Commerce of the United States Senate a statement of which the following is an abstract:

The part which our industry performs in the national economy is to furnish the physical facilities with which transportation is carried on. We look with disfavor upon any project for a transportation system which would end American leadership in mechanical progress in this field. One of the conditions of such progress is that the discoverer, the inventor, or developer of improvements, no matter how poor or obscure, may carry his device, project or system from one railway to another until he finds a road willing to make a test of it.

This essential condition becomes less favorable as the number of railways decreases and would actually or in effect be a single system in which design, specification and purchase are centralized, since the discoverer or developer whose plea for trial is rejected by the one man or the one board representing such a unified railway system would have none other to whom or to which he could go. It is well to remember that certain of the discoveries and inventions which have contributed most vitally to the economy and safety of railway operation have been refused a trial by leading personages in transportation history.

The above observations apply also to commodities now more or less generally used and to staples not patented. Quality of output and of service improves if new concerns coming into the field can make a place for themselves by demonstration of some kind of superiority over the older companies. The selection of goods and of dealers is an administrative act, an exercise of judgment, in which able and honest men may and do differ. It is therefore in the public interest that the rejection of tenders by one road shall not close the door and that if rejected by one road there may be many roads to which a maker or dealer may go until one is found willing to give him a trial in the course of which he may demonstrate the quality and the character which in time will attract buyers who at first were indifferent and hostile.

Standardization

It is common to inquire whether the standard locomotive or the standard car produced under government control is a good locomotive or a good car. It is also frequently asked whether it was wise or unwise for the railroad administration to attempt standardization under the conditions as they existed. From our point of view these are past questions which all concerned can well afford to ignore. The problem which should seriously concern us is the future. Whatever merits the standard locomotive and the standard car may have, these vehicles are made up of ingredients which were developed under a system of independent competing railroads. There is nothing to indicate that under unified purchase mechanical progress would continue. It is our judgment that it would not. We believe that if standardization had been adopted 10 or 15 years ago the standard locomotive of today or one as good could not have been constructed. We are convinced further that if central standards should be adopted now either under government control or through co-operation among railroads, 10 or 15 years from now the locomotive of that day will be little if any in advance of what we have now.

One of the conditions under which manufacturers of equip-

ment can best perform the service which the public rightfully expects of us is that in whatever adjustment Congress adopts the individual railroad shall remain clothed with full discretion as to design, specification and purchase, and that there shall be as little consolidation of lines as may be consistent with the financial strength and stability of the several roads.

Government Leases for Operation

In advocating the preservation of numerous independent railway organizations we would lay stress upon the word "independent." Various recommendations are under public discussion which, in our judgment, would tend to defeat such independence.

One of those recommendations is that while leasing railroads to private operating companies the government should own the properties.

As furnishers of railway necessities, we assure you of our conviction that dealing with a railroad owned by the government would be dealing with the government, even though the government were to go through the form of delegating operation to a company nominally private. We would expect production of equipment to be centralized in due course. We would look upon such an arrangement as the beginning of the end of mechanical progress, and as the signal that inventors and developers of invention had better seek other occupations.

Government Guarantee

Another recommendation which is before you is government guarantee.

Guarantee, like ownership, portends government directors on railroad boards. The guarantor as well as the owner has a stake in supervision over expenditures. The hour when you sanction government guarantees, that hour you place the hand of government on the management and give every employee an occupational interest in elections.

Strong and Weak Road

Another recommendation from which we apprehend injury to the railway system and to the public is that excess income collected in a fund for improvements upon weak roads should be administered by the Interstate Commerce Commission, or some other branch of the government. Here once more we would have the hand of the government in management.

This particular proposal aims to solve a problem which must be solved in any workable adjustment. That problem, as it has been defined in questions asked of witnesses, particularly by Senator Cummins, is the dilemma where a strong and a weak road serve common termini. They take the same rates. They serve points not common. One of them is so impoverished that an increase in rates sufficient for it to give reasonably adequate service would merely enrich the other road, which is giving reasonably satisfactory service on existing rates.

The question has been asked whether the credit of the weaker lines will ever be strengthened with consent of any government authority so long as the result would be the unnecessary enrichment of the stronger competing roads. The proposal is to establish a fund from excess income. This is in essence a proposal to mobilize railway credit and diffuse the surplus income of roads which have any over the traffic needs of populations at present ill served.

Our point is this: If such diffusion of surplus income is to be employed, Congress should exhaust every other expedient before deciding that such a fund is to be administered by the

government itself. Can we not agree that any such arrangement should be under regulation? But if the government is to perform the function, who will do the regulating?

In this aspect the question is not dissimilar from the phases previously set forth in this brief.

Why not let or make the railroads themselves administer their own improvement fund? By a provision for co-operation among the corporations for this and perhaps for other purposes Congress would at a stroke rid the government of a cloud of embarrassments and complications. The simplest method, and the method growing most naturally out of experience, would be for the statute to lay down the duty which the common carriers are to perform in this particular and authorize some governmental agent to see that the law is carried out.

A broader question, of which the weak-and-strong-road problem is a part, is that of adequate revenue.

Many Millions Affected

"We have already remarked that concerns the whole or a large part of whose product was for railways, including everything from raw material to finished products, have employed about as many men as the railways employ—or upwards of one million and three-quarters. We have seen that those looking to these industries for livelihood largely increased in number since that estimate was computed. With those dependent upon them the number directly affected aggregates many millions. Add to these the people of the manufacturing communities who are engaged in trade and in making articles which are bought for consumption by those on the industrial payroll, not to mention the stockholders in all these industrial and commercial institutions, and it is evident that the rise and fall of activity in railway supplies is a barometer of the whole national prosperity."

The occasion for addressing this communication to the Director General was that unemployment has been rapidly spreading in our industry and apparently the proposed expenditure for additions and betterments in 1919 was to be very much less in what the dollars would buy and in the employment which those dollars would give to working men than actual outlays of previous years when enlargement of railway plant had been regarded as woefully insufficient. That particular question is before the Appropriation Committees of the Congress.

Facilities at Highest Cost

Provision of facilities by fits and starts is the most expensive possible process. By that process a very much larger amount of plant and size of organization in the railway supply industries is required than if the production could be equalized through all the years of every decade. Somebody has to pay for the idle weeks. Who is it that pays? On the one hand the public, either in rates unnecessarily high or in service unnecessarily poor. On the other hand our employees pay in a loss of working days which is never more than partly made up in the wage-scale and in demoralization which is never made up.

By deferring orders for equipment and improvements to a time when traffic is becoming large and earnings are on the mend, the railways enter the market at the one time when everything they buy will be at top prices. To spread the production equally over the years would make it possible to do business with a smaller industrial plant and would mean the acquirement of the facilities at a lower average price.

The provision of transportation facilities could be carried on more advantageously to all concerned if the railway companies were placed in position such that when traffic is large they may accumulate a surplus and in time of light traffic employ such surplus in the confidence that the rate and

revenue policy of the government will be adequate and stable through an indefinite future.

To us it has long been obvious that regulation affecting revenue must be unified. Our resolution on this point is as follows:

Exclusive Federal Rate Regulation

"We favor the adoption by Congress of a policy under which regulation of maximum and minimum rates of carriers engaged in interstate commerce would be federal only."

This resolution involves two changes in the existing situation. It proposes that the regulatory authority shall have power to order rates raised, which is not now a power granted under the Interstate Commerce Act. The other feature is that Congress shall formally announce its supremacy over all rates of all instrumentalities of interstate commerce.

Congress, we believe, should not alone declare rate regulation federal only, but should define the aim of federal rate regulation so as to include the development of transportation facilities and create such administrative functionaries as will assure the accomplishment of that purpose.

Those for whom I speak advocate the creation of some functionary other than the Interstate Commerce Commission for the task of restoring railway credit. The committee of which I am chairman, not having been in the confidence of the railway executives, put into type for consideration of our general executive committee a questionnaire to be sent to the railway supply industry. One of the propositions upon which the recipient could vote yes or no was as follows:

"Congress should adopt a policy of federal rate regulation under which a separate functionary would consider carriers' estimates of future railway traffic needs and, subject to abatement of discriminations by the Interstate Commerce Commission, would fix rates designed to yield revenue sufficient for future operations and credit."

At a meeting when this document was considered it became known that a similar idea was contained in the plan at that time, December 18, in process of concurrence by the railway executives. Our questionnaire went out as originally drawn, and upon the proposition above quoted those replying cast 280 votes in favor and 6 against.

When the results of this questionnaire and the details of the railway executives' plan were before us at our annual meeting in Chicago in January, it was decided to adopt in our tentative draft of suggestions to Congress the expression, "Secretary of Transportation."

Even if the function of promoting transportation development were one which could be effectively performed by a commission, this particular commission was born and bred to another type of task. If men of the requisite calibre could be found willing to accept a one-ninth part of the power so to serve the public it might take years before men chosen for development instead of restriction would come into control unless a ripper bill were passed. But how many men in the United States who have demonstrated executive capacity would accept appointment in what is virtually an appointment to attempt executive accomplishment through an agency which by its composition is adapted rather to deliberation than to action.

The new functionary proposed by us would be expected, as set forth in the resolution adopted by our association, "to consider carriers' estimates of future expenditures, including labor costs; to exercise exclusive supervision over security issues and to fix rates designed to yield revenue sufficient for future operations and credit."

The International & Great Northern will move its general offices from Houston, Texas, to Palestine on May 1. Arrangements are now being made for office and housing facilities at Palestine.

General News Department

Views of business men on the relation of the government to the railroads, as gathered by the New York Evening Post, continue uniformly to show opposition to government ownership or operation. At St. Paul, the correspondent finds commercial interests "thoroughly alarmed over the state of affairs in the transportation world."

Coal loading for the week ending January 25 amounted to 195,529 cars, as compared with 222,582 for the corresponding week of 1918. Loading for the following week is estimated at 178,641 cars, as compared with 207,499. Grain loading for the five weeks ending February 1 amounted to 119,871 cars, as compared with 97,033 for the corresponding period of 1918.

Three long established coastwise steamship lines have been discontinued, the reason given being inefficiency of labor and high cost of operation. These lines are the Clyde Line, New York to Wilmington; the Clyde Line between Philadelphia and Norfolk, which has been in business half a century, and the Mallory Line between New York and Mobile.

The sailing day plan, which was introduced in Chicago some time ago to apply on l. c. l. traffic to destinations on western lines, will be extended next month to include all eastern lines as well. The plan not only includes the movement of merchandise on specific shipping days, but also the consolidation of business over certain lines for designated destinations to secure full car loads.

Curtailement of expenses, in all departments where curtailment is practicable, is reported as having been ordered by the railroads in the anthracite coal region and also on the Pennsylvania Railroad at Altoona. Shipments of anthracite are now only about one-half the regular movement a few weeks ago. At Altoona considerable numbers of shopmen were notified that their services would no longer be required.

The Engineering Experiment Station of the University of Illinois, Urbana, Ill., announces that eight research graduate assistantships will be open to graduates of approved American and foreign universities and technical schools at the conclusion of the current academic year. These positions carry an annual stipend of \$500 and freedom from all fees except the matriculation and diploma fees. Applications will be received until March 1.

The bill for leasing coal, oil, gas, etc., deposits on the public domain, as reported to Congress by the conference committee on February 11, includes a provision that no railroad or other common carrier shall be permitted to take, or acquire through lease or permit, under the act, any coal lands or deposits of coal in excess of such area or quantity as may be required and used solely for its own use; and may be permitted to take, under the provisions of the bill, not to exceed one lease for each 200 miles of its line.

Protests against the dismissal of women employed as checkers in the parcel rooms of the Union Station at Washington have been made by the Women's Trade Union League in a statement filed with the director general, which indicated a belief that a general order for the dismissal of women workers had been issued. At the office of the Railroad Administration it was explained, however, that the women had been removed from the baggage work because the work was too heavy for them, on the strength of a report made by inspectors of the Women's Service Section.

The American Railway Engineering Association has created a committee on standardization whose function will be to co-operate with the other committees of the association in placing the recommendations of the association in effect on the railroads and among the manufacturers of engineering and maintenance equipment. The personnel of the committee consists in the main of the chairmen of those committees of the association which are interested in the preparation of standards.

The conferees appointed to reconcile the differences between the bills as passed by the House and the Senate to validate the "informal" war contracts for munitions and supplies have reported an agreement eliminating the section proposed by the Senate which was seriously objected to by the representatives of the manufacturers because it provided for a review of settlements made by the War Department by representatives of the Department of Justice. This provision the manufacturers feared would result in interminable delays.

Alaska railroads need an additional appropriation of \$13,800,000 to carry them to completion; and this sum has been asked of Congress by Secretary Lane of the Department of the Interior. This includes \$4,000,000 of the \$35,000,000 originally estimated as the cost of the construction of the road, and a deficiency appropriation of \$9,800,000, representing the unexpected increase in the cost of labor and materials. It is now estimated that the road can be finished for \$44,800,000 in three seasons more of work.

Ohio Mine Workers, declaring that the representatives of the Railroad Administration are using every possible effort to reduce the price of railroad coal to less than the price set by the President for the duration of the war, have sent a resolution to Congress, and it was presented in the House on February 6 by Representative Sherwood. The resolution declares that if the policy of reducing the price of railroad coal is adopted it will cause many of the mines to close. The miners ask the authorities at Washington to insist that the railroads pay the price fixed by the government.

"No-Accident Week" in the Southern Region

The campaign on the railroads of the Southern Region which was begun by the safety supervisors of the roads in that region with a view to seeing how low the list of deaths and injuries of employees could be carried for a single week, January 19-25, resulted in a record showing three employees killed and 85 injured, as compared with ten killed, and 394 injured in the corresponding week of 1918.

This movement, as was noted in the *Railway Age* of January 17, page 186, was ordered by the regional director in emulation of the "no accident week" on the Central of Georgia in December, when, among the 9,000 employees of that road, none were killed and only one was injured, and that very slightly.

Of the fifty railroads participating in the regional campaign, 32 show safety records of 100 per cent. Eight reported only one injury and only four reported over ten each. Of all the 85 persons injured, only four cases have been reported as "serious." Four-fifths of the accidents are classed as "avoidable."

Of the 230,000 employees on the roads in the Southern Region about 90 per cent signed the pledge to do their best to make no-accident week a success. However, the one road, a small one, which had the lowest percentage of signatures to pledges, reported 100 per cent safety for the week.

Classifying the roads according to the proportion of injuries to employees to the total number of persons in service, the road standing at the head of the list is the Nashville, Chattanooga & St. Louis; one employee injured to 10,356 in service. Of the other five roads employing more than 10,000 persons each, the standing is as follows: Illinois Central, one in 4,400; Southern Railroad, one in 3,412; Louisville & Nashville, one in 2,908; Atlantic Coast Line, one in 1,874; Seaboard Air Line, one in 1,486. The roads reporting fatal accidents were the Atlantic Coast Line, the Southern and the Blue Ridge, one each.

Chamber of Commerce Transportation Conference

The transportation conference called by the Railroad Committee of the Chamber of Commerce of the United States, held its second meeting at Washington on February 13.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF DECEMBER, 1918

Name of road.	Average mileage operated during period.	Operating revenues			Operating expenses			Net from railway operation.	Railway tax accruals.	Operating (or loss).	Increase (or decrease) last year.
		Freight.	Passenger.	Total.	Way and structures.	Traffic.	Transportation.				
Alabama Great Southern.....	312	\$653,717	\$209,836	\$863,553	\$58,347	\$5,835	\$394,280	\$172,263	\$32,651	\$139,591	43,358
Alabama & Vicksburg.....	141	187,323	64,790	252,113	34,323	11,714	118,286	35,375	19,439	19,439	37,023
Ann Arbor.....	301	294,363	56,790	351,153	36,908	7,649	164,531	62,117	131,000	48,869	38,408
Arizona Eastern.....	398	326,794	44,530	371,324	70,918	1,793	122,004	316,229	6,657	309,496	156,931
Atchafalaya, Topeka & Santa Fe.....	8,629	9,917,029	3,218,068	13,135,097	4,690,384	127,513	6,372,303	2,063,296	578,898	1,481,647	1,873,574
Atlanta & West Point.....	43	144,009	103,631	247,640	20,866	2,131	101,510	90,640	1,266	89,372	74,553
Atlanta, Birmingham & Atlantic.....	639	340,051	161,821	501,872	101,986	5,818	278,645	112,127	22,082	79,398	126,279
Atlantic & St. Lawrence.....	170	179,746	113,135	292,881	47,233	308	170,125	56,222	16,695	39,527	60,648
Atlantic Coast Line.....	4,840	3,460,417	1,699,995	5,160,412	908,628	43,829	2,196,167	1,398,045	200,000	1,197,279	837,749
Baltimore & Ohio Chicago Terminal.....	5,145	10,880,807	3,024,911	13,905,718	3,856,034	130,003	1,507,031	15,014,641	337,867	1,512,222	1,384,136
Baltimore & Chesapeake & Atlantic.....	87	86,104	46,410	132,514	13,472	803	152,660	15,807	31,876	18,924	121,447
Baltimore & Annapolis.....	31	335,006	77,210	412,216	15,437	986	178,560	21,800	18,800	1,000	7,474
Beaumont & Sour Lake.....	118	69,597	24,773	94,370	21,981	3,253	242,729	32,459	18,333	14,126	4,307
Belt Ry. Co. of Chicago.....	31	779,431	37,778	817,209	35,698	571	204,441	10,304	16,443	6,139	3,684
Bessemer & Lake Erie.....	208	68,282	1,649,639	1,717,921	31,361	7,494	367,115	162,102	11,440	150,662	240,202
Boston & Maine.....	27	3,226,791	1,649,639	4,876,430	83,312	5,461	70,726	106,45	36,885	42,266	43,490
Buffalo & Susquehanna R. R. Corp.....	2,258	178,399	1,649,639	1,828,038	1,522,387	49,325	4,035,346	1,837,394	253,014	2,090,531	2,220,053
Buffalo, Rochester & Pittsburgh.....	587	1,434,902	130,711	1,565,613	321,075	13,452	665,666	37,843	1,570,365	35,761	101,953
Canadian Pacific Lines in Maine.....	233	261,586	41,425	303,011	91,100	1,664	219,059	112,25	21,452	60,495	27,743
Carolina, Clinchfield & Ohio.....	284	437,276	34,870	472,146	78,316	5,943	162,302	121,303	32,701	98,578	50,137
Central of New Jersey.....	682	2,648,173	631,373	3,279,546	1,139,473	30,703	2,134,704	98,558	3,991,212	11,411	447,758
Central New England.....	301	442,511	24,993	467,504	107,384	2,157	271,951	20,315	484,759	32,389	54,973
Central Vermont.....	411	329,131	76,286	405,417	84,796	5,033	378,908	164,13	290,595	7,936	313,313
Charleston & Western Carolina.....	343	225,570	81,887	307,457	28,863	4,259	131,501	119,027	9,000	110,027	19,008
Chesapeake & Ohio Lines.....	2,484	5,257,484	1,412,992	6,670,476	981,245	31,697	2,416,351	2,144,013	175,000	1,969,543	57,051
Chicago & Alton.....	1,050	1,559,066	482,172	2,041,238	1,560,972	15,088	1,038,270	212,585	64,450	1,000,000	8,450
Chicago & Eastern Illinois.....	1,181	1,646,251	406,666	2,052,917	466,737	4,719	1,028,764	250,276	79,542	354,943	53,585
Chicago & Erie.....	269	902,330	119,754	1,022,084	237,310	12,142	565,523	88,96	125,576	29,151	154,661
Chicago & Northwestern.....	8,090	6,853,559	2,510,127	9,363,686	2,136,246	59,601	6,435,044	11,660,601	1,452,784	1,652,784	3,453,905
Chicago, Burlington & Quincy.....	9,373	9,350,334	2,358,364	11,708,698	2,057,550	84,347	5,681,482	10,463,977	95,729	2,063,255	2,215,298
Chicago, Detroit & Can. Grd. Trk. Jct.....	1,496	1,137,109	412,656	1,549,765	278,642	481,937	930,237	1,772,432	61,058	148,376	449,820
Chicago Great Western.....	6,570	702,845	247,926	950,771	151,606	299,843	427,119	130,795	45,650	85,145	15,854
Chicago, Indianapolis & Louisville.....	12	9,333,877	1,988,644	11,322,521	339,178	6,381	268,726	117,57	59,595	6,141	75,736
Chicago Junction.....	10,272	1,247,555	1,988,644	3,236,199	3,344,170	90,548	5,866,057	283,811	12,550,003	101,74	730,323
Chicago, Milwaukee & St. Paul.....	242	124,755	25,620	150,375	79,008	3,510	132,590	130,730	7,400	152,847	1,791,048
Chicago, Peoria & St. Louis.....	474	254,429	79,762	334,191	97,483	1,633	163,566	101,57	5,564	12,581	106,293
Chicago, Rock Island & Gulf.....	7,729	5,585,400	2,987,587	8,572,987	1,689,974	73,256	4,111,423	8,653,167	229,630	687,630	2,451,464
Chicago, Rock Island & Pacific.....	1,789	1,528,776	567,030	2,095,806	334,970	18,123	1,138,853	55,035	1,960,500	90,866	193,501
Chicago, St. Paul, Minn. & Omaha.....	374	355,537	23,595	379,132	85,358	6,127	152,197	104,64	14,500	32,457	105,777
Chicago, Terre Haute & Southeastern.....	321	191,613	46,302	237,915	71,543	4,903	123,063	110,20	10,868	38,284	33,260
Cincinnati, Indianapolis & Western.....	337	1,005,347	466,505	1,471,852	108,267	9,611	552,943	79,09	325,117	80,520	233,436
Cincinnati, New Orleans & Tex. Pacific.....	251	244,260	16,860	261,120	35,589	2,193	109,546	43,741	9,439	34,298	20,106
Cincinnati Northern.....	2,395	4,296,336	1,432,663	5,729,000	742,396	63,344	7,681,681	1,377,710	241,103	1,135,877	233,123
Cleveland, Cincinnati, Chic. & St. Louis.....	1,100	1,160,001	134,150	1,294,151	132,958	6,535	430,232	501,722	47,000	454,578	125,120
Coal & Coke.....	42	23,356	90,736	114,092	8,748	133	47,625	26,388	4,500	21,888	2,876
Colorado & Wyoming.....	116	493,214	81,469	574,683	72,017	873	23,552	50,88	6,925	28,441	12,524
Cummins Creek & Colorado Springs.....	163	493,214	81,469	574,683	72,017	873	23,552	50,88	6,925	28,441	12,524
Cumberland Valley.....	902	2,278,828	183,881	2,462,709	381,841	16,248	1,335,001	399,722	15,663	180,630	3,937
Delaware & Hudson Co. R. R. Dept.....	955	4,379,726	1,019,426	5,399,152	721,606	46,666	2,601,703	1,299,065	80,840	1,177,905	171,930
Delaware, Lackawanna & Western.....	2,651	2,376,678	342,605	2,719,283	508,040	14,176	1,086,499	413,973	62,000	351,868	763,248
Denver & Rio Grande.....	255	39,003	15,582	54,585	80,607	691	73,888	136,61	9,000	173,645	137,137
Denver & Salt Lake.....	381	120,288	31,357	151,645	21,199	625	38,871	18,395	10,341	8,255	1,612
Detroit & Mackinac.....	61	196,495	31,357	227,852	204,228	338	63,747	114,198	7,157	107,060	45,258
Detroit & Toledo Shore Line.....	457	287,476	14,116	301,592	72,533	1,198	195,887	121,08	5,400	73,410	1,043
Detroit, Grand Haven & Milwaukee.....	292	82,336	23,756	106,092	59,391	402	138,527	193,178	6,117	200,312	7,091
Duluth & Iron Range.....	410	166,886	44,322	211,208	142,146	2,813	189,998	17,557	17,151	249,057	89,180
Duluth, Missabe & Northern.....	601	131,013	84,814	215,827	93,134	4,286	179,712	31,901	5,632	46,934	43,284
Duluth, South Shore & Atlantic.....	175	119,828	23,573	143,401	23,493	9,012	127,815	86,36	26,170	11,537	14,330
Duluth, Winnipeg & Pacific.....	3	80,347	6,203	86,550	6,203	180	80,992	128,65	2,000	25,024	15,138
East St. Louis Connecting Ry.....	1,027	977,887	156,310	1,134,197	132,173	9,521	344,389	501,831	288,885	242,946	170,342
El Paso & Southwestern Co.....	309	1,705,669	1,085,383	2,791,052	2,037,562	6,360	762,298	65,58	40,556	654,503	233,334
Elgin, Joliet & Eastern.....	1,987	6,224,505	1,985,383	8,209,888	577,404	51,717	4,843,085	1,46,519	121,969	269,955	236,775
Florida East Coast.....	765	451,274	282,647	733,921	121,002	17,614	381,442	8,309	23,522	94,464	81,953
Ft. Smith & Western R. R. Co.....	253	84,452	30,011	114,463	13,719	3,479	46,114	22,223	2,816	19,089	21,674

MONTH OF DECEMBER, 1911

REVENUES AND EXPENSES OF RAILWAYS													
MONTH OF DECEMBER, 1918 (CONTINUED)													
Name of road.	Average mileage operated during period.	Operating revenues		Total (inc. misc.).	Maintenance of way and equipment.		Operating expenses		Operating ratio.	Net from railway operation.	Railway tax accruals.	Operating income (or loss).	Increase (or decrease) in income last year.
		Freight.	Passenger.		General.	Traffic.	Portation.						
Fort Worth & Denver City.....	454	\$177,522	\$177,522	\$800,144	\$86,451	\$120,382	\$22,625	\$530,775	66.33	\$269,369	\$2,196	\$267,166	\$77,259
Ft. Worth & Rio Grande.....	235	\$65,869	\$65,869	\$21,781	\$21,781	\$23,374	\$1,272	\$8,260	98.20	\$8,260	\$2,579	\$783	\$13,635
Fondo, Johnson & Glensville, R. Co.	402	\$19,880	\$19,880	\$58,607	\$58,607	\$60,901	\$1,272	\$8,260	66.65	\$3,065	\$3,223	\$29,843	\$711,382
Galveston, Harrisburgh & San Antonio.....	1,382	\$47,609	\$47,609	\$1,850,416	\$1,850,416	\$1,850,416	\$1,850,416	\$1,850,416	73.13	\$497,126	\$3,223	\$490,673	\$711,382
Galveston, Wharf.....	13	\$121,520	\$121,520	\$11,715	\$11,715	\$11,715	\$11,715	\$11,715	53.11	\$52,383	\$1,528	\$47,255	\$5,117
Georgia Southern & Florida.....	328	\$22,877	\$22,877	\$37,529	\$37,529	\$37,529	\$37,529	\$37,529	73.05	\$171,774	\$5,950	\$165,796	\$15,328
Georgia, Rapid & Indiana.....	402	\$23,386	\$23,386	\$1,086	\$1,086	\$1,086	\$1,086	\$1,086	98.20	\$98,200	\$1,272	\$96,928	\$13,635
Grand Trunk.....	569	\$369,973	\$369,973	\$347,002	\$347,002	\$347,002	\$347,002	\$347,002	109.72	\$347,002	\$18,748	\$365,750	\$18,748
Grand Northern.....	1,002	\$1,640,603	\$1,640,603	\$7,848,200	\$7,848,200	\$7,848,200	\$7,848,200	\$7,848,200	103.98	\$7,848,200	\$51,237	\$7,796,963	\$1,609,091
Gulf & Ship Island.....	8,257	\$112,435	\$112,435	\$182,480	\$182,480	\$182,480	\$182,480	\$182,480	110.59	\$182,480	\$21,924	\$160,556	\$16,924
Gulf, Colorado & Santa Fe.....	307	\$19,928	\$19,928	\$19,928	\$19,928	\$19,928	\$19,928	\$19,928	122.94	\$19,928	\$16,408	\$3,520	\$16,408
Gulf, Mobile & Northern.....	464	\$58,668	\$58,668	\$59,473	\$59,473	\$59,473	\$59,473	\$59,473	110.59	\$59,473	\$16,408	\$43,065	\$16,408
Hocking Valley & West Texas.....	196	\$127,265	\$127,265	\$206,267	\$206,267	\$206,267	\$206,267	\$206,267	113.77	\$206,267	\$16,908	\$189,369	\$16,908
Houston, East & Texas Central.....	882	\$939,465	\$939,465	\$1,738,349	\$1,738,349	\$1,738,349	\$1,738,349	\$1,738,349	89.77	\$20,102	\$27,322	\$12,222	\$16,908
Houston, Central.....	4,782	\$6,334,742	\$6,334,742	\$17,423,367	\$17,423,367	\$17,423,367	\$17,423,367	\$17,423,367	109.40	\$72,722	\$6,000	\$66,722	\$146,274
Illinois Harbor Belt.....	116	\$757,276	\$757,276	\$77,132	\$77,132	\$77,132	\$77,132	\$77,132	52.20	\$177,929	\$13,405	\$164,524	\$13,405
Indiana Harbor & Great Northern.....	115	\$300,715	\$300,715	\$10,335	\$10,335	\$10,335	\$10,335	\$10,335	60.74	\$32,525	\$8,062	\$24,463	\$8,062
International & Michigan.....	465	\$60,892	\$60,892	\$10,935	\$10,935	\$10,935	\$10,935	\$10,935	93.13	\$10,935	\$8,234	\$2,701	\$8,234
Kanawha & Orient.....	272	\$989,150	\$989,150	\$241,960	\$241,960	\$241,960	\$241,960	\$241,960	112.11	\$189,191	\$40,939	\$148,252	\$40,939
Kansas City, Mexico & Orient.....	774	\$59,217	\$59,217	\$773,021	\$773,021	\$773,021	\$773,021	\$773,021	106.57	\$773,021	\$33,605	\$739,416	\$33,605
Kansas City Southern.....	900	\$675,730	\$675,730	\$1,133	\$1,133	\$1,133	\$1,133	\$1,133	120.71	\$1,133	\$19,404	\$1,113,615	\$19,404
Kansas City, Western.....	96	\$294,904	\$294,904	\$512,024	\$512,024	\$512,024	\$512,024	\$512,024	106.57	\$512,024	\$17,434	\$494,590	\$17,434
Lake Erie & Western.....	224	\$4,044,686	\$4,044,686	\$940,392	\$940,392	\$940,392	\$940,392	\$940,392	81.25	\$1,898,175	\$50,780	\$1,847,395	\$50,780
Lake Erie & Hudson River.....	398	\$884,271	\$884,271	\$1,269,545	\$1,269,545	\$1,269,545	\$1,269,545	\$1,269,545	79.45	\$33,975	\$74,876	\$40,901	\$74,876
Lehigh & New England.....	1,168	\$96,560	\$96,560	\$43,923	\$43,923	\$43,923	\$43,923	\$43,923	155.678	\$43,923	\$2,319	\$41,604	\$2,319
Lehigh Valley.....	302	\$242,329	\$242,329	\$2,540,032	\$2,540,032	\$2,540,032	\$2,540,032	\$2,540,032	107.40	\$2,540,032	\$15,000	\$2,525,032	\$15,000
Long Angeles & Salt Lake.....	207	\$6,620,424	\$6,620,424	\$19,414	\$19,414	\$19,414	\$19,414	\$19,414	120.71	\$19,414	\$70,444	\$19,344	\$70,444
Louisiana & Arkansas.....	4,996	\$207,501	\$207,501	\$361,244	\$361,244	\$361,244	\$361,244	\$361,244	114.51	\$361,244	\$2,319	\$358,925	\$2,319
Louisiana Western.....	199	\$73,984	\$73,984	\$117,702	\$117,702	\$117,702	\$117,702	\$117,702	107.40	\$117,702	\$17,434	\$100,268	\$17,434
Louisville & Nashville.....	1,216	\$4,582,187	\$4,582,187	\$3,658,540	\$3,658,540	\$3,658,540	\$3,658,540	\$3,658,540	80.59	\$3,658,540	\$15,000	\$3,643,540	\$15,000
Louisville, Henderson & St. Louis.....	1,887	\$237,519	\$237,519	\$75,587	\$75,587	\$75,587	\$75,587	\$75,587	108.34	\$75,587	\$1,346,349	\$74,240	\$1,346,349
Maine Central.....	100	\$1,280	\$1,280	\$1,538	\$1,538	\$1,538	\$1,538	\$1,538	115.52	\$1,538	\$17,379	\$1,520,661	\$17,379
Maryland, Delaware & Virginia.....	1,646	\$816,642	\$816,642	\$1,067,625	\$1,067,625	\$1,067,625	\$1,067,625	\$1,067,625	124.11	\$1,067,625	\$29,356	\$1,038,269	\$29,356
Michigan Central.....	195	\$32,431	\$32,431	\$25,007	\$25,007	\$25,007	\$25,007	\$25,007	88.30	\$25,007	\$78,759	\$86,764	\$78,759
Midland Valley.....	4,243	\$3,148,842	\$3,148,842	\$31,088	\$31,088	\$31,088	\$31,088	\$31,088	83.22	\$31,088	\$40,511	\$30,577	\$40,511
Minneapolis & St. Louis.....	365	\$90,985	\$90,985	\$18,859	\$18,859	\$18,859	\$18,859	\$18,859	125.955	\$18,859	\$3,590	\$15,269	\$3,590
Minn. & International Ry. Co. Marie.....	332	\$5,897,972	\$5,897,972	\$1,734,678	\$1,734,678	\$1,734,678	\$1,734,678	\$1,734,678	116.47	\$1,734,678	\$32,956	\$1,701,722	\$32,956
Missouri & North Arkansas.....	7,108	\$1,035,144	\$1,035,144	\$23,302	\$23,302	\$23,302	\$23,302	\$23,302	70.24	\$23,302	\$241,225	\$23,061	\$23,061
Missouri, Okla. & Gulf.....	991	\$260,680	\$260,680	\$841,009	\$841,009	\$841,009	\$841,009	\$841,009	84.88	\$841,009	\$18,326	\$822,683	\$18,326
Missouri, Okla. & Gulf of Tex.....	108	\$162,356	\$162,356	\$1,893,304	\$1,893,304	\$1,893,304	\$1,893,304	\$1,893,304	51.05	\$1,893,304	\$106,844	\$1,786,460	\$106,844
Missouri Pacific.....	5	\$631,601	\$631,601	\$420,255	\$420,255	\$420,255	\$420,255	\$420,255	84.86	\$420,255	\$8,878	\$411,377	\$8,878
Monongahela Connecting.....	400	\$123,963	\$123,963	\$212,497	\$212,497	\$212,497	\$212,497	\$212,497	102.004	\$212,497	\$62,015	\$150,482	\$62,015
Monongahela & Tex. R. & S. Co.....	1,248	\$200,040	\$200,040	\$125,139	\$125,139	\$125,139	\$125,139	\$125,139	139.51	\$125,139	\$40,604	\$84,539	\$40,604
Morgan's La. & Tex. R. & S. Co.....	207	\$349,333	\$349,333	\$151,435	\$151,435	\$151,435	\$151,435	\$151,435	102.004	\$151,435	\$17,379	\$134,056	\$17,379
Nashville, Chattanooga & St. Louis.....	284	\$22,661	\$22,661	\$38,462	\$38,462	\$38,462	\$38,462	\$38,462	121.68	\$38,462	\$178,706	\$24,757	\$178,706
Nevada Northern North Eastern R. Co.....	191	\$17,011,568	\$17,011,568	\$2,382,879	\$2,382,879	\$2,382,879	\$2,382,879	\$2,382,879	105.07	\$2,382,879	\$17,134	\$1,365,745	\$17,134
New Orleans South Shore R. R. Co.....	6,079	\$2,332,656	\$2,332,656	\$116,362	\$116,362	\$116,362	\$116,362	\$116,362	100.00	\$116,362	\$1,330,427	\$1,216,235	\$1,330,427
New Orleans, Great & Mexico.....	572	\$401,674	\$401,674	\$3,607,048	\$3,607,048	\$3,607,048	\$3,607,048	\$3,607,048	105.00	\$3,607,048	\$20,000	\$3,587,048	\$20,000
New Orleans, Tex. & Mexico.....	1,992	\$25,232	\$25,232	\$107,894	\$107,894	\$107,894	\$107,894	\$107,894	121.68	\$107,894	\$75,935	\$31,959	\$75,935
New York Central & St. Louis.....	368	\$58,143	\$58,143	\$133,543	\$133,543	\$133,543	\$133,543	\$133,543	105.00	\$133,543	\$3,906,766	\$129,777	\$3,906,766
New York, New Haven & Hartford.....	121	\$78,129	\$78,129	\$60,113	\$60,113	\$60,113	\$60,113	\$60,113	79.75	\$60,113	\$1,590,677	\$1,530,564	\$1,590,677
New York, Ontario & Western.....	135	\$5,575,019	\$5,575,019	\$1,016,581	\$1,016,581	\$1,016,581	\$1,016,581	\$1,016,581	105.00	\$1,016,581	\$20,000	\$996,581	\$20,000
New York, Philadelphia & Norfolk.....	2,087	\$366,842	\$366,842	\$1,193,780	\$1,193,780	\$1,193,780	\$1,193,780	\$1,193,780	105.00	\$1,193,780	\$347,089	\$846,691	\$347,089
New York, Susquehanna & Western.....	2,907	\$8,089,255	\$8,089,255	\$1,491,130	\$1,491,130	\$1,491,130	\$1,491,130	\$1,491,130	105.00	\$1,491,130	\$21,960	\$1,469,170	\$21,960
Norfolk & Western.....	6,501	\$243,260	\$243,260	\$459,135	\$459,135	\$459,135	\$459,135	\$459,135	105.00	\$459,135	\$87,334	\$371,801	\$87,334
Norfolk Southern.....	2,367	\$1,658,662	\$1,658,662	\$504,218	\$504,218	\$504,218	\$504,218	\$504,218	105.00	\$504,218	\$153,420	\$1,505,248	\$153,420
Northern Pacific.....	2,772	\$305,689	\$305,689	\$83,761	\$83,761	\$83,761	\$83,761	\$83,761	105.00	\$83,761	\$140,092	\$195,751	\$140,092
Northern Short Line R. R. & Nav. Co.....	2,772	\$305,689	\$305,689	\$83,761	\$83,761	\$83,761	\$83,761	\$83,761	105.00	\$83,761	\$140,092	\$195,751	\$140,092
Oregon Washington & Santa	2,772	\$305,689	\$305,689	\$83,761	\$83,761	\$83,761	\$83,761	\$83,761	105.00	\$83,761	\$140,092	\$195,751	\$140,092

REVENUES AND EXPENSES OF RAILWAYS

TWELVE MONTHS OF CALENDAR YEAR 1918 (CONTINUED)

Name of road.	Average mileage operated during period.	Operating revenues—Total			Operating expenses—			Net from railway operation.	Operating income (or loss).	Railway tax accruals.	Increase (or decrease) comp. with last year.
		Freight.	Passenger.	(Inc. misc.)	Maintenance of way and structures.	Traffic.	Portation.				
Boston & Maine.....	7,258	\$43,085,444	\$19,048,390	\$69,911,331	\$10,018,497	\$14,175,174	\$480,808	\$37,540,340	\$436,924	\$64,430,772	
Buffalo & Susquehanna R. R. Corp.....	265	2,135,357	70,036	2,205,393	424,531	839,733	90,443	2,267,658	90,443	2,267,658	
Buffalo, Rochester & Pittsburgh.....	585	16,437,948	1,335,097	18,479,659	2,847,761	5,966,244	187,924	17,577,208	393,795	17,577,208	
Canadian Pacific Lines in Maine.....	233	1,945,843	293,153	2,409,261	581,854	34,436	34,436	2,697,159	111,94	2,697,159	
Carolina, Clinchfield & Ohio.....	282	4,302,163	415,593	4,717,756	656,281	1,168,483	94,115	1,537,081	152,294	1,537,081	
Central of New Jersey.....	684	33,387,854	7,753,316	44,790,621	10,419,020	301,724	20,458,641	36,369,271	38,36	36,369,271	
Central New England.....	301	3,994,241	206,947	4,201,188	1,171,535	1,062,351	20,617	2,998,462	125,352	2,998,462	
Central Vermont.....	411	3,799,590	847,285	3,188,837	819,187	1,323,477	89,611	2,368,538	159,638	2,368,538	
Charleston & Western.....	342	2,154,489	301,587	2,456,076	422,430	1,034,601	50,036	1,324,607	2,317,402	1,324,607	
Chesapeake & Ohio Lines.....	2,479	55,720,373	13,629,892	73,720,797	9,700,660	16,178,333	484,418	26,189,743	1,240,715	54,143,002	
Chicago & Alton.....	1,050	17,849,857	5,567,436	24,358,662	3,522,418	5,996,340	316,522	10,238,655	490,251	20,677,429	
Chicago & Eastern Illinois.....	1,131	20,811,732	4,030,671	26,753,092	3,559,040	2,753,942	10,801,204	26,965,560	90,002	26,965,560	
Chicago & Erie.....	269	9,116,203	933,506	11,039,823	1,836,863	1,438,442	161,660	5,509,711	272,034	9,741,123	
Chicago & Northwestern.....	8,090	87,630,796	28,000,861	127,295,679	19,490,621	26,834,170	931,445	58,833,777	2,655,530	109,498,372	
Chicago, Burlington & Quincy.....	9,373	104,492,837	28,052,903	144,172,769	19,996,386	29,726,987	1,209,796	56,825,203	3,396,495	112,067,616	
Chicago Great Western.....	1,496	12,888,035	4,736,821	19,116,925	3,129,185	5,130,651	386,761	8,480,989	497,329	17,783,098	
Chicago, Indianapolis & Louisville.....	657	7,602,550	2,462,523	11,017,274	1,303,589	2,551,160	190,187	4,548,118	83,888	4,548,118	
Chicago Junction.....	12	.....	.....	.....	626,723	543,805	6,844	2,529,566	85,157	3,792,094	
Chicago, Milwaukee & St. Paul.....	10,302	96,623,658	23,492,031	132,894,455	18,906,980	38,669,987	1,244,656	60,740,935	302,684	121,196,105	
Chicago, Peoria & St. Louis.....	247	1,763,212	265,161	2,214,466	425,157	784,931	44,301	1,197,682	89,092	2,541,164	
Chicago, Rock Island & Gulf.....	474	3,073,785	1,072,939	4,120,008	649,079	729,283	85,773	1,712,774	131,198	3,787,098	
Chicago, Rock Island & Pacific.....	7,794	66,112,432	26,818,294	99,369,557	14,700,856	24,782,395	1,177,790	42,643,829	2,245,883	86,098,574	
Chicago, St. Paul, Minn. and Omaha.....	1,749	16,897,813	6,238,807	24,829,981	3,056,371	5,056,102	1,720,793	636,587	20,884,199	84,10	
Chicago, Terre Haute & Southeastern.....	374	4,644,202	235,467	5,000,956	661,512	1,713,859	46,452	1,813,201	102,599	4,373,050	
Cincinnati, Indianapolis & Western.....	321	2,319,509	531,510	3,137,153	512,005	935,907	72,845	1,494,352	131,946	3,151,064	
Cincinnati, New Orleans & Tex. Pacific.....	337	10,340,639	4,138,650	15,479,240	1,394,508	4,662,350	204,715	5,490,054	302,313	12,604,040	
Cincinnati Northern.....	247	2,529,069	189,321	2,821,980	428,904	535,777	1,056,794	2,342,938	83,042	2,342,938	
Cleveland, Cincinnati, Chic. & St. Louis.....	2,362	49,934,633	15,359,128	71,298,040	13,894,337	28,922,455	1,201,871	51,995,289	72,67	19,508,882	
Colorado & Southern.....	1,100	10,114,942	2,019,673	12,953,827	1,483,365	2,782,227	98,991	4,228,240	3,578,537	564,000	
Colorado & Wyoming.....	42	336,053	24,972	1,227,240	124,283	180,833	2,010	496,703	50,960	367,750	
Cripple Creek & Colorado Springs.....	116	791,225	113,402	927,306	80,722	115,540	13,745	34,516	553,276	47,944	
Cumberland Valley.....	163	4,801,725	749,152	5,917,543	567,875	900,603	65,135	2,029,151	141,397	3,150,506	
Delaware & Hudson Co. R. R. Dept.....	902	30,104,926	2,804,056	37,737,523	3,737,523	5,936,063	254,677	16,556,075	1,052,962	31,553,784	
Delaware, Lackawanna & Western.....	955	50,297,391	11,204,813	68,740,076	6,552,541	13,337,602	664,088	28,613,367	1,219,107	49,525,685	
Denver & Rio Grande.....	2,611	24,634,502	4,922,280	31,357,214	4,635,541	8,400,802	264,345	11,260,010	701,352	25,293,475	
Denver & Salt Lake.....	255	1,676,857	302,327	2,055,509	760,922	845,184	11,456	1,222,468	49,528	2,889,559	
Denver & Mackinac.....	381	1,128,353	325,347	1,550,334	273,426	437,374	26,521	1,222,468	49,528	2,889,559	
Detroit & Toledo Shore Line.....	61	1,960,970	199,026	2,159,996	149,937	222,436	17,154	663,120	45,589	1,097,306	
Detroit, Toledo & Ironton.....	459	3,070,617	341,341	3,413,341	1,010,432	1,010,432	45,418	1,875,434	140,036	3,795,141	
Duluth & Iron Range.....	285	8,517,290	232,475	8,978,930	1,163,395	1,134,257	8,548	2,279,849	160,532	4,744,742	
Duluth, Missabe & Northern.....	411	20,214,748	443,550	21,545,271	1,902,945	1,722,262	34,255	3,788,755	492,886	7,957,433	
Duluth, South Shore & Atlantic.....	601	3,806,934	1,012,275	4,824,187	991,643	748,106	77,026	2,288,096	108,418	4,263,021	
Duluth, Winnipeg & Pacific.....	175	1,400,222	266,469	1,712,066	238,925	287,120	33,604	826,140	75,038	1,463,093	
East St. Louis Connecting Ry.....	3	.....	.....	.....	142,381	247,363	3,503	874,685	46,935	1,313,530	
El Paso & Southwestern Co.....	1,028	11,785,974	2,334,758	14,790,468	1,416,320	2,471,490	155,628	4,165,189	348,947	8,629,027	
Elgin, Joliet & Eastern.....	806	17,708,548	128	20,685,049	1,772,775	5,028,666	80,903	7,555,016	302,242	14,785,277	
Erie.....	1,989	67,683,701	11,689,243	87,855,461	10,775,540	28,462,305	845,099	40,303,329	2,085,419	87,663,773	
Florida East Coast.....	764	5,062,714	2,578,389	8,841,222	1,176,625	1,540,285	109,506	3,798,948	212,292	6,742,703	
Ft. Smith & Western R. R. Co.....	253	897,393	302,487	1,296,857	200,901	341,131	37,287	466,657	69,246	1,120,475	
Fort Worth & Denver City.....	454	5,611,412	1,987,611	7,956,342	792,875	1,741,319	53,934	3,144,590	273,418	6,036,624	
Ft. Worth & Rio Grande.....	235	678,414	390,444	1,151,033	218,205	267,927	19,793	540,538	56,665	1,103,127	
Fonda, Johnston & Gloversville R.R. Co.....	88	354,234	714,898	1,153,137	117,243	297,337	7,444	413,120	61,742	696,889	
Galveston, Harrisburg & San Antonio.....	1,371	14,708,781	5,274,253	21,273,847	2,335,937	3,799,480	276,789	7,864,672	621,821	14,986,130	
Galveston Wharf.....	13	.....	.....	.....	142,698	18,892	3,609	351,943	25,148	687,690	
Georgia.....	328	4,196,619	2,085,482	6,716,503	513,568	897,299	90,093	2,689,287	166,425	4,358,772	
Georgia Southern & Florida.....	402	2,202,925	1,127,735	3,694,801	567,370	934,928	56,928	1,555,758	118,196	3,249,538	
Grand Rapids & Indiana.....	369	4,805,660	1,798,798	7,207,727	937,963	1,790,490	16,886	2,465,526	246,538	7,746,555	
Grand Trunk Western.....	1,017	14,820,434	2,829,354	19,376,033	3,278,796	4,542,157	277,385	9,257,215	307,968	17,240,952	
Great Northern.....	8,258	76,937,445	15,627,420	100,661,067	17,391,119	20,754,685	778,385	43,002,266	1,356,878	84,389,570	
Gulf & Ship Island.....	367	1,737,689	605,471	2,548,060	324,448	455,716	44,986	888,676	117,147	2,033,132	
Gulf, Colorado & Santa Fe.....	1,934	12,844,674	4,878,258	18,895,098	4,422,867	3,476,115	228,958	7,138,792	609,313	14,829,929	
Gulf, Mobile & Northern.....	349	1,867,949	426,399	2,418,292	431,541	557,449	169,168	1,114,555	2,156,111	2,652,182	
Hocking Valley.....	407	1,343,613	1,038,843	1,315,861	1,490,446	3,718,009	83,222	4,912,857	248,697	10,448,792	
Houston, East & West Texas.....	190	1,463,318	502,089	2,087,716	326,889	288,957	18,377	889,239	42,716	1,566,079	
Houston & Texas Central.....	928	6,189,187	2,212,798	1,208,145	941,981	1,203,144	1,500,932	109,922	3,645,059	6,397,011	
Illinois Central.....	4,778	79,271,487	20,543,263	107,320,261	16,301,104	26,615,299	855,542	43,214,596	2,587,348	90,184,41	
Indiana Harbor Belt.....	116	.....	.....	.....	1,339,427	1,339,427	22,427	3,659,004	160,410	6,397,712	
International & Great Northern.....	1,159	8,859,715	3,597,255	13,476,888	2,103,699	3,083,452	159,104	5,858,605	449,047	11,643,003	

REVENUES AND EXPENSES OF RAILWAYS

TWELVE MONTHS OF CALENDAR YEAR 1918 (CONTINUED)

Name of road.	Average mileage operated during period.	Operating revenues			Maintenance of way and structures.			Operating expenses			Net operating ratio.	Railway tax accruals.	Operating income (or loss).	Increase (or decrease) last year.
		Freight.	Passenger.	Total (inc. misc.).	Way and structures.	Traffic.	Trans-shipment.	General.	Total.					
Kanawha & Michigan.....	176	\$4,552,914	\$1,118,461	\$5,896,134	\$657,736	\$1,509,671	\$32,828	\$1,876,389	\$4,207,119	171.35	\$1,689,015	\$227,934	\$1,461,081	\$608,615
Kansas City, Mexico & Orient.....	272	1,040,234	155,394	1,259,627	259,368	460,350	37,866	680,357	1,604,682	127.34	345,007	73,157	418,165	357,602
Kansas City, Mexico & Orient of Texas.....	465	976,445	147,557	1,188,657	289,245	463,240	30,003	666,266	1,513,658	127.34	325,001	64,031	389,731	346,167
Kansas City Southern.....	774	11,858,056	2,241,542	15,250,406	1,846,144	3,014,974	211,532	6,035,899	429,332	75.57	3,725,406	694,447	3,028,667	1,150,289
Kansas City Terminal Co.....	24	.....	.....	1,247,830	174,946	284,407	.....	635,029	1,113,030	89.19	134,799	212,475	79,857	204,259
Lake Erie & Western.....	900	8,252,429	626,336	9,343,905	2,476,819	1,275,217	146,976	4,331,306	260,091	90.32	303,893	340,066	562,339	1,291,437
Lehigh & Hudson River.....	96	2,333,219	45,620	2,378,839	334,563	446,070	19,127	1,085,436	67,921	78.85	523,732	71,600	452,131	262,295
Lehigh & New England.....	230	3,679,107	17,208	3,696,315	518,284	757,988	57,862	1,347,515	1,027,076	93.11	1,205,775	103,408	1,102,366	187,060
Lehigh Valley.....	1,442	5,921,165	6,234,935	65,586,769	7,818,030	17,004,251	654,982	30,523,764	1,189,734	87.43	8,240,734	1,874,237	6,364,382	3,211,614
Long Island.....	398	5,713,725	14,246,016	22,213,444	2,894,843	3,173,826	134,773	9,845,758	500,529	75.25	5,495,961	1,069,859	4,422,788	37,364
Los Angeles & Salt Lake.....	1,167	9,847,716	3,617,524	14,517,378	1,883,663	3,052,669	270,805	5,069,072	309,187	74.88	3,645,690	717,990	4,226,058	1,394,436
Louisiana & Arkansas.....	302	1,216,629	382,344	1,671,651	371,697	309,652	37,511	673,682	1,460,451	87.36	1,199,139	169,708	1,029,432	39,065
Louisiana Western.....	207	2,854,649	1,241,013	4,095,662	347,697	643,106	66,269	1,147,881	119,309	54.01	1,999,635	169,708	1,829,032	39,065
Louisville & Nashville.....	5,023	71,479,723	24,484,069	101,392,792	13,126,522	23,341,988	1,366,060	39,623,246	1,778,735	78.46	21,835,821	3,322,221	18,500,698	2,203,287
Louisville, Henderson & St. Louis.....	199	2,001,211	730,904	2,858,463	422,567	414,044	71,132	1,029,018	63,966	70.13	853,644	72,648	780,674	98,669
Maine Central.....	1,216	10,705,228	4,371,841	16,415,178	2,741,845	3,618,917	136,515	9,087,910	397,184	97.65	385,432	803,928	418,773	3,141,152
Maryland, Delaware & Virginia.....	82	685,693	386,294	1,101,323	96,855	291,895	11,636	719,088	22,288	103.67	140,437	19,797	60,234	119,588
Michigan Central.....	1,861	45,949,560	15,901,385	68,520,087	7,705,080	12,382,737	738,990	28,214,019	1,149,799	74.53	17,430,015	1,899,790	15,542,761	2,728,665
Midland Valley.....	387	2,642,575	725,267	3,367,842	567,709	594,384	25,829	1,298,176	136,194	74.82	882,489	84,778	797,470	9,090
Mineral Range.....	100	1,085,325	26,340	1,143,534	199,695	268,367	4,626	615,416	131,118	96.30	42,292	40,000	2,272	2,272
Minneapolis & St. Louis.....	1,646	9,826,142	2,049,093	12,028,300	2,128,724	2,989,574	150,891	5,792,794	310,001	94.53	657,204	648,298	51,73	2,602,261
Minn. & International Ry. Co.....	195	650,256	282,677	992,094	203,886	203,789	5,758	509,407	40,058	97.05	29,196	24,393	264,184	24,393
Minn., St. Paul & Sault Ste. Marie.....	4,239	27,097,097	6,255,850	33,352,947	5,255,935	7,292,081	359,329	15,821,329	82,889	34.55	6,239,685	2,185,266	4,054,092	5,277,220
Missouri & North Arkansas.....	365	855,842	442,478	1,404,131	402,590	303,225	24,927	621,892	68,641	101.18	16,645	67,974	89,553	315,616
Missouri, Oklahoma & Gulf.....	332	1,403,706	292,478	1,780,546	410,484	561,854	24,944	938,481	110,047	115.00	267,254	102,487	372,156	529,102
Missouri Pacific.....	7,221	63,486,625	19,535,391	89,612,397	14,112,986	18,577,820	1,071,351	36,522,014	2,136,230	81.72	16,380,659	3,144,291	13,218,384	.....
Mobile & Ohio.....	1,096	11,903,288	2,099,882	14,840,901	1,916,624	4,728,755	362,044	6,697,083	438,226	95.21	709,729	525,234	182,246	2,554,382
Monongahela.....	108	2,869,965	241,825	3,208,797	740,998	338,242	13,008	1,114,266	64,602	70.78	937,641	62,991	874,644	118,274
Morgan's La. & Texas R. R. & S. Co.....	400	5,897,357	1,854,187	8,352,107	903,869	1,419,815	92,534	2,943,846	1,908,317	89.22	266,442	33,174	2,417,681	31,788
Nashville, Chattanooga & St. Louis.....	1,239	14,554,220	59,789,701	74,343,921	2,592,941	4,774,566	431,918	9,281,721	480,387	81.00	4,133,838	399,730	3,735,520	752,873
Nevada Northern.....	168	2,458,517	181,474	2,706,332	284,133	329,305	10,748	649,171	1,362,575	49.65	1,362,575	206,442	1,155,523	166,365
New Orleans & North Eastern.....	203	4,292,393	1,401,582	6,474,718	716,837	1,437,821	92,429	2,749,654	137,788	80.19	1,282,302	309,591	972,102	327,229
Newburgh & South Shore R. R. Co.....	7	.....	.....	246	1,453,577	199,633	657,939	36,262	1,144,075	78.69	309,682	98,308	211,734	170,415
New Orleans Great Northern.....	284	1,634,463	465,608	2,197,315	334,426	422,636	33,695	809,051	90,097	77.08	503,436	109,484	393,588	190,043
New Orleans, Texas & Mexico.....	191	1,355,288	473,622	1,888,624	368,350	407,691	27,618	613,601	91,836	79.27	388,485	100,589	287,506	167,269
New York Central.....	6,079	190,113,757	68,380,430	294,691,313	34,094,030	61,695,183	2,843,631	123,108,568	6,855,134	62,287	609,119	50,299,060	6,553,022	.....
New York, Chicago & St. Louis.....	5,772	20,123,977	1,831,291	22,055,268	2,615,637	4,172,820	368,548	9,734,020	557,593	77.16	5,166,624	647,330	4,518,937	1,907,178
New York, New Haven & Hartford.....	1,992	50,721,288	39,379,916	102,294,212	13,523,533	20,913,413	47,523	48,020,080	3,087,451	85.77	14,547,688	13,216,375	11,315,332	9,156,535
New York, Ontario & Western.....	567	7,140,143	2,168,484	9,308,627	1,557,482	2,763,995	102,125	5,300,294	2,502,625	91.55	920,481	257,124	621,908	1,605,768
New York, Philadelphia & Norfolk.....	121	5,748,929	1,278,999	7,027,928	743,451	1,774,650	115,511	3,361,924	1,33,216	82.32	1,349,061	256,024	1,092,943	149,772
New York, Philadelphia & Western.....	135	3,310,483	624,063	4,353,420	414,709	727,073	24,519	2,537,992	89,924	87.22	559,350	175,345	383,886	172,615
Norfolk & Western.....	2,083	68,752,260	10,237,599	82,004,034	9,524,729	21,272,931	536,709	28,739,291	1,309,866	75.09	20,424,737	2,904,000	17,510,838	4,275,418
Norfolk Pacific.....	6,584	78,534,344	17,146,144	102,908,259	14,226,887	16,716,958	779,683	37,501,968	1,818,941	69.49	31,391,957	6,499,718	24,586,629	4,009,795
Northwestern Pacific.....	507	3,033,300	2,110,872	5,144,172	570,238	881,548	682,511	2,201,299	1,29,463	69.68	1,728,630	263,477	1,465,119	53,964
Oregon Short Line.....	2,326	25,941,123	5,885,682	31,826,805	4,602,020	5,113,453	246,877	10,028,742	1,021,169	63.30	12,527,367	2,025,043	10,496,119	2,015,668
Oregon-Washington R. R. & Nav. Co.....	2,066	17,696,064	6,239,290	26,264,957	4,157,529	3,629,174	379,238	10,100,012	1,008,328	75.07	6,547,348	1,512,046	5,035,013	796,038
Panhandle & Santa Fe.....	741	4,275,636	1,253,186	5,809,657	1,092,040	1,767,965	46,772	2,303,316	17,527	92.11	1,851,875	194,560	2,256,798	.....
Pennsylvania Company.....	1,754	70,628,885	15,931,995	95,330,322	14,989,937	25,170,160	959,992	42,732,560	2,063,917	90.59	9,890,065	3,480,625	5,498,652	6,743,664
Pennsylvania Railroad.....	5,403	239,481,059	75,325,078	367,414,695	51,693,998	99,145,128	2,922,867	166,437,063	8,146,648	96.24	33,796,171	10,611,131	23,149,178	31,447,051
Peoria & Pekin Union.....	19	283,558	73,451	357,009	177,291	145,835	623	973,387	47,515	115.96	208,447	113,769	332,216	353,783
Pere Marquette.....	2,238	22,200,348	4,237,796	28,965,012	3,790,387	6,143,894	344,773	12,233,619	7,531,118	80.52	5,639,460	697,135	4,940,823	618,778
Philadelphia & Reading.....	1,126	66,755,088	8,683,464	80,769,564	7,316,702	13,354,094	495,762	37,144,619	14,029,372	81.57	14,880,192	1,718,737	13,161,126</	

February 14, 1919

REVENUES AND EXPENSES OF RAILWAYS

TWELVE MONTHS CALENDAR YEAR 1918 (CONTINUED)

Name of road.	Average mileage operated during period.	Freight.	Passenger.	Total operating revenues (inc. misc.)	Maintenance of way and structures.	Equip. ment.	Trans- portation.	General.	Total.	Operating ratio.	Net from railway operation.	Railway tax accruals.	Operating income (or loss).	Increase (or decr.) comp. with last year.
South Buffalo	35	\$582,509	\$40,568,652	\$1,563,096	\$1,563,096	\$195,862	\$3,960	\$22,284	\$1,252,702	80.14	\$310,394	\$2,500	\$277,891	\$31,462
Southern	6,982	76,183,282	12,574,297	12,574,297	12,574,297	24,570,010	1,493,452	2,659,714	91,810,425	72.53	34,763,872	3,742,144	30,976,625	3,933,752
Southern	278	876,967	525,793	1,319,496	1,319,496	190,089	48,772,492	2,659,714	91,810,425	72.53	34,763,872	3,742,144	30,976,625	3,933,752
Southern	7,049	101,958,575	39,324,653	151,948,642	151,948,642	28,163,566	1,438,732	3,195,202	113,652,898	73.82	40,295,743	7,127,320	33,127,096	9,463,250
Spokane	162	813,118	164,921	1,011,605	1,011,605	103,509	17,850	148,529	658,528	65.09	353,076	49,308	303,693	42,369
Spokane	554	5,952,144	1,972,329	8,496,941	8,496,941	975,802	2,389,222	227,149	5,196,274	61.15	3,300,671	810,006	2,490,099	269,097
Spokane	23	886,166	821,574	1,934,773	1,934,773	274,803	1,535	96,505	1,700,426	87.88	299,286	78,527	220,759	130,647
Spokane	293	1,936,893	937,968	3,011,813	3,011,813	669,634	1,258,519	82,513	2,712,527	90.06	689,298	400,829	288,469	141,144
Tennessee	81	998,448	190,566	1,281,122	1,281,122	141,894	470,348	53,744	838,558	65.45	442,564	92,853	349,703	111,504
Tennessee	469	4,952,782	1,899,578	7,445,600	7,445,600	1,030,702	2,686,657	146,874	6,133,503	82.65	1,292,097	256,082	1,033,493	1,192,977
Texas	1,946	17,996,085	7,449,816	27,294,833	27,294,833	3,610,862	294,428	196,984	21,500,380	80.24	5,394,452	1,086,634	4,301,252	1,940,329
Texas	435	8,696,365	10,026,558	1,645,593	1,645,593	299,397	4,796,368	63,987	8,914,123	89.00	1,112,434	118,988	752,295	850,029
Toledo	247	1,075,145	899,377	8,306,127	8,306,127	1,365,517	116,920	125,179	6,684,138	101.36	-22,520	274,200	1,607,620	-90,039
Toledo	368	884,528	173,489	1,164,137	1,164,137	343,428	622,714	95,603	1,536,887	132.01	-372,750	69,673	-442,516	184,678
Toledo	128	524,791	279,592	1,006,444	1,006,444	180,413	27,332,798	2,506,389	59,877,810	100.81	-8,799	35,421	35,114,379	7,484,812
Toledo	3,624	72,679,802	18,055,066	98,443,365	98,443,365	16,328,758	3,728,456	78,565	6,355,141	89.78	38,565,555	3,446,327	63,919	668,073
Trinity	98	1,394,119	6,879	1,409,236	1,409,236	190,726	2,666,638	67,192	2,043,531	99.99	704,704	39,707	664,998	661,181
Union	171	1,577,515	809,357	2,689,104	2,689,104	374,341	1,029,125	39,079	2,223,357	82.68	465,748	132,586	332,837	356,406
Union	516	10,478,630	637,648	11,906,444	11,906,444	1,532,407	4,815,019	193,319	9,277,917	77.92	2,628,527	469,030	2,159,451	1,943,675
Vicksburg	2,591	34,498,242	9,993,358	48,246,411	48,246,411	6,104,353	22,489,629	1,099,242	40,124,609	83.16	8,121,802	1,328,591	6,800,910	3,752,972
Virginia	35	1,112,206	2,313,790	4,027,035	4,027,035	270,848	1,293,816	238,913	2,074,093	51.50	1,932,684	483,374	1,450,010	1,059,970
Washington	359	3,437,048	6,465,047	10,599,543	10,599,543	2,511,140	7,153,140	414,615	15,526,447	100.81	-124,096	518,400	-642,929	4,255,429
West Jersey	707	13,528,180	1,004,671	15,402,352	15,402,352	2,861,071	3,625,271	254,193	15,526,447	71.31	3,124,046	600,876	2,521,610	4,255,429
Western Maryland	1,011	9,187,892	1,373,496	11,065,963	11,065,963	2,034,146	3,625,271	254,193	15,526,447	72.10	713,464	83,737	629,641	266,889
Western Pacific	133	1,425,769	941,306	2,558,203	2,558,203	293,671	5,555,555	305,064	11,263,852	82.88	2,326,321	662,017	1,664,304	1,374,613
Western Ry. of Alabama	511	11,970,359	485,488	13,592,172	13,592,172	2,092,844	5,555,555	305,064	11,263,852	74.43	5,755,471	812,300	4,930,718	13,244
Wheeling & Lake Erie	1,382	17,074,084	4,486,278	22,477,009	22,477,009	3,053,250	8,183,363	558,377	16,731,537					
Yazoo & Mississippi Valley														

Traffic News

A meeting of chamber of commerce and industrial traffic commissioners and managers was held at the Hotel Statler, Cleveland, Ohio, on February 10, for the purpose of organizing the Ohio State Traffic League. Memberships in the new association will be limited to traffic representatives of commercial organizations and industries in the state of Ohio.

The Western Freight Traffic Committee will hold a hearing in the Transportation building, Chicago, on February 18, on proposed increased minimum weights on a considerable number of commodities in carloads, the minimum weights of which have been fixed heretofore by the U. S. Food Administration. As the Food Administration regulations have been withdrawn, it is believed by the railroads that the minimum weights now shown in tariffs should be increased.

The Traffic Managers' Committee of the Omaha (Neb.) Chamber of Commerce, consisting of about 75 industrial traffic men, held its annual election on January 30. C. E. Child, traffic manager of the Chamber of Commerce, was elected chairman and W. F. Crosby, traffic manager of M. E. Smith & Co., was elected secretary. Resolutions were adopted opposing government ownership and operation of the railroads and the express company and advocating the return of these properties to their owners as soon as the passage of necessary legislation will permit. The chairman was instructed to urge upon the Railroad Administration the re-establishment of foreign line traffic offices and to protest against the limited "sailing days."

Disposal of 1918 Wheat Crop in Sight

In a statement made before the Agricultural Committee of the House of Representatives on February 5, J. H. Barnes, president of the Food Administration Grain Corporation, predicted that the wheat crop of 1918 will not complicate next year's problems by any material carryover or surplus. Roughly, the total crop of 1918 was 918,000,000 bu.; deducting 100,000,000 bu. for seed and 470,000,000 bu. for home consumption, a balance of 348,000,000 bu. remains available for export. Of this balance 180,000,000 bu. had already been shipped abroad by February 1. For the remaining 170,000,000 bu. the Grain Corporation has commitments, definite and estimated, for 165,000,000 bu. to be supplied to European allies, the Commission for Relief in Belgium, neutrals, and European relief.

Two Solutions of the Railroad Problem Proposed

Resolutions recently adopted by the Illinois Manufacturers' Association and the Traffic Club of Cleveland offer detailed recommendations regarding the solution of the railroad problem in this country. Both organizations are opposed to government operation or ownership and ask the prompt return of the railroads to a condition of regulated competition. While the Illinois Manufacturers' Association recommends that the Interstate Commerce Commission be relieved of executive and administrative duties, except those relating to accounts and the valuation of railroads, and that its activities be confined to judicial functions, the Cleveland Traffic Club asks for an enlargement of the commission and for equal representation of industries and railroads in its membership; it also would extend the jurisdiction of the commission to cover disputes regarding wages and working conditions of railroad employees.

The Illinois manufacturers propose the creation of a department of transportation, the head of which would be known as the secretary of transportation and they also advocate the creation of regional commissions, composed of one member from each state, which would hear and determine all complaints from causes arising in their respective regions and would make reports thereon to the Interstate Commerce Commission as in the case of reports by Masters in Chancery. The Cleveland Traffic Club, on the other hand, is opposed both to regional commissions and a secretary of transportation.

Foreign Railway News

The railways of France on October 1 next, says a Havas despatch, are to be again put on a peace footing except for certain minor restrictions.

The Spanish Minister of Public Works is introducing in the senate a bill for the construction by the state of an electric railway from the French frontier to Algeciras in the extreme south of Spain, direct.

The Federal railway authorities in Australia have had offered for their consideration no fewer than 126 different devices to meet the break of gage difficulty, but none has found favor. They are of the following types: Sliding wheel, 23; double or multiple wheels, 40; telescopic and divided wheels, 9; adjustable truck frame, 3; changing truck, 7; transference of bodies, 13; treble or multiple rails, 6; unclassified 25.

The railways of India on March 31, 1914, had 170,444 freight cars. The number laid up for repairs at present is about 10,290, or about 6 per cent, of which 1,860, or about 1 per cent of the total, were laid up for want of materials. The number is lower than in normal times, owing to the efforts the railways were making to keep every available freight car on the road. The number of cars sent overseas was 4,251; all of these except 56 were of metre or 2 feet 6 in. gage.

Sleeping Cars for Japanese "Thirds."—It appears that there is a good deal of overcrowding on the long-distance railways in Japan, and even on an important trunk line like the Tokaido passengers suffer considerable inconvenience. In order to improve the condition, the Imperial Government Railways have designed a type of sleeping cars for third-class passengers and the scheme is included in the budget for next year. According to the Railway Times of Tokyo, the sleeping car is an ordinary day coach, the seats of which are convertible into lower berths while the upper berths are attachable at night. On the upper beds, which are located along the direction of car, passengers can sleep in the usual Japanese manner, and on the lower, which are located crosswise, they can lie on their sides and can stretch their feet. The fare will be about 1 yen (50 cents) per day, including the extra fare for the high-speed train, and it is hoped that fairly good rest may be enjoyed by third-class passengers, which is the most important class in local passenger traffic.

The British Military authorities, says a Reuter despatch, have taken over the administration of the Bagdad Railway, while the French have taken charge of the Oriental Railways of European Turkey. M. Huguenin, the Swiss general manager of the Bagdad Railway, has been relieved of his functions and is proceeding to Western Europe. As regards the railways in the Aidin Vilayet, the British have assumed control of the Aidin Railway, which is a British concern, while the French have taken over the Kassaba Railway, which is a French enterprise. The newspapers announce the arrest of Fesmei Bey, ex-Deputy for Diarbekr, who is accused of having taken an active part in the massacre of the Armenians.

Railway Improvements in Jamaica

The approaching termination of the war sees Jamaica's government and progressive business interests taking up projects of public benefit and service which have been delayed by the existing circumstances, writes Vice-Consul Davis B. Levis from Kingston.

A foreshore railway to link up the government railway system with several miles of the harbor front, with its many warehouses and piers accommodating the seagoing traffic of the island, is one of the important measures considered in addition to the floating-dock project lately reported.

The proposal of the government to issue a \$1,500,000 loan to be expended for public improvements, such as new branch railway lines, public roads, etc., is expected to be consummated shortly. . . .

The projects named should afford trade opportunities for American manufacturers of steel products, railway equipment, road building and other machinery, hardware, implements, cement, lumber, and building materials.

Plenty of Rolling-Stock in Germany

The London Times' special correspondent at Berne telegraphed to his paper recently that in view of the German "shrieks" about shortage of rolling-stock it is interesting to learn from a leading German railway magazine of December 4 that, in spite of the congestion of the railways with military trains, the transport of food and coal is being carried on without difficulty.

Belgium Asks for Return of Locomotives

The State Department at Washington has received through the American Legation at Brussels a request from the Belgium government asking the United States to lend it 400 locomotives and 2,000 cars in addition to returning all of the 359 locomotives which were placed at the disposal of the American Expeditionary forces. The communication from Minister of Railways Renkin, sets forth the urgent need for additional rolling stock in Belgium to replace that commandeered or destroyed by the Germans. The American army has returned 187 of the Belgian locomotives, but the remaining 172 still are in use by the Expeditionary forces.

A Railway Line from Vigo, Spain

The Spanish press, says Consul Edward I. Nathan, writing from Vigo, Spain, has recently been publishing articles concerning an alleged project of American financiers to build a direct railroad line from Vigo (on the Atlantic Ocean) to Irun on the Franco-Spanish frontier on the Bay of Biscay side, and to run steamers from New York to Vigo. The advantage of this port arises from its geographical position which permits the distance from ocean travel between Europe and the United States to be considerably shortened. While there is at present a railroad line from Vigo to Irun, it makes many deviations and the service is far from adequate for heavy passenger traffic. The projected line to Irun will be only about 450 miles in length and with a good roadbed and heavy locomotives this distance could be covered by express trains in 10 hours. The project is a revival of plans that had been previously considered, but which the Spanish authorities had not acted upon.

A Sidelight on the Swiss Railway Situation

The Federal Railways of Switzerland are reported to be showing a big deficit in spite of increased fares and a great curtailment of train services, including, toward the end of 1918, the total abolition of Sunday and express traveling. Private railway and steamboat companies, despite government aid, also are in sad straits. The war has brought home to Switzerland her dependence upon foreign countries for coal and most kinds of raw materials. She hopes and expects to remedy this weakness by electrifying her railways, developing her internal waterways and securing cheap access to the North Sea, Mediterranean and Adriatic by way of the Rhine, the Rhone and the Po. This, of course, requires the co-operation of the other countries concerned, but they are fully alive to the importance of water transport.

The Rhine is already navigable from Basel, where new docks and wharfage are under construction. Connection between Geneva and Lyons is being promoted, as also the linking up of the Rhine and Rhone systems.

Railway Extension in Peru

As briefly noted in last week's issue, the Peruvian Congress has passed a law authorizing the construction of a railroad from Paita to the Marañon river, with a branch to Ferrenfe and another to Hualgayoc. The government guarantees to the capital invested a subsidy of 7 per cent per annum for 39 years, fixing as a maximum on which this subsidy is to be paid the amount of \$30,000,000. Further details concerning

this project are to the effect that the subsidy shall be obtained from the duties and taxes which the grantees must pay as follows: (a) Import and export duties on articles consumed either directly or indirectly by the concessionaire in the mines or mountain lands, which have been granted to him for exploitation. (b) Taxes on the profits and revenues which are obtained from the exploitation of the railroads and other associated enterprises, as well as the direct exploitation of mines and mountain grants. (c) Revenue stamps and registry fees on the contracts made. (d) Taxes on the mines which are conceded by the law. If in any one year these duties and imposts do not amount to the interest agreed upon, the State shall not be responsible for the difference; but, on the other hand, if the taxes should exceed the interest, the grantee must pay the excess. The subsidy mentioned above shall be paid until the line is finished, only in the proportion corresponding to the number of kilometres opened to public traffic. The guarantee for the carrying out of this contract or bid for the construction of this work shall be the sum of \$50,000 in cash or its equivalent in bonds of the internal loan, which will be refunded as soon as 100 kilometres (62 miles) of the railway have been completed. This railway shall enjoy all the benefits and concessions conferred by existing laws on railways and by the law of March 7, 1889, on docks.

Siam's Purchases of Railway Material

Practically all of the railway material used, both for the Siamese government and for private railways, is imported from foreign countries. The government railways now open to traffic consist of 588 miles of standard gage lines and 838 miles of meter gage lines, the former being known as the Northern and the latter as the Southern line. The total length of the four private lines open to traffic is 66 miles, namely, the Paknam Railway of 12 miles, the Tachin Railway of 20 miles, and the Meklong Railway of 21 miles, meter gage, and the Phrabad Railway, 12 miles, 2 ft. 6 in. gage.

The supplies imported for these railways and landed at the port of Bangkok are listed by the customs under the heads of "railway material" and "cars and trucks for railways or tramways and parts thereof."

The origin and value of the imports into Siam of railroad material and cars and trucks for railways, etc., from foreign countries during the four fiscal years ended March 31, 1917, was as follows:

Imported from—	1913-14	1914-15	1915-16	1916-17
RAILROAD MATERIAL				
United States	\$228,382	\$106,705	\$25,796	.....
United Kingdom	124,199	195,861	74,212	\$117,519
Belgium	28,008	86,783	.....	.....
British North Borneo .....	.....	.....	3,574	18,582
Denmark	8,931	.....	.....	.....
Germany	111,897	85,176	115	.....
India	7,433	.....	10,981	.....
Netherlands, India .....	.....	.....	4,746	.....
Singapore	70	489	3,768	1,082
Total	\$508,920	\$475,014	\$123,192	\$137,183
CARS AND TRUCKS, ETC.				
United States	\$3,033	\$1,952	.....	\$2,943
United Kingdom	16,353	86,071	131,957	188,780
Belgium	660	14,767	.....	.....
France	478	.....	.....	.....
Germany	60,970	1,529	.....	.....
Singapore	50	.....	25	764
Total	\$81,544	\$104,319	\$131,982	\$192,487

The customary method of buying railway material for the government railways has been through public tender, while for the private railways the supplies are bought through their respective directors.

It is reported that the Northern line of the government railways is sometimes as much as 400 wagons short per day, and that the usual shortage daily is 200 wagons, while on the Southern line the shortage occasionally reaches about 100 wagons. The need for rolling stock is likely to become still more acute as new sections on both lines yet remain to be opened up for freight traffic.

The old Siamese system of weights and measures is still in general use, although it was decided some time ago to adopt the metric system.

There are no local government restrictions on the imports of

railway material except the three per cent ad valorem duty which is paid at the port of landing by the importer and levied on the invoice value of goods, including cost of packing, freight, insurance, and all other charges up to the time of the arrival of the goods in port.

Communications may be addressed to the respective railways, the offices of which are all located in Bangkok.

Sixth National Foreign Trade Convention

James A. Farrell, chairman of the National Foreign Trade Council, has issued the formal call for the Sixth National Foreign Trade convention to be held in the Congress Hotel, Chicago, on Thursday, Friday and Saturday, April 24, 25 and 26.

Foreign Trade Essential to American Industry will be the theme of the convention.

A tentative program is announced as follows:

FIRST DAY, THURSDAY, APRIL 24

Convention called to order at 10 a. m. by James A. Farrell, chairman of the National Foreign Trade Council.

Organization of convention—Election of presiding officers, secretaries, etc.; address of president of convention; appointment of general convention committee. Session topic: America's Need of Foreign Trade, from the viewpoint of production, finance, labor and imports.

Afternoon session, 2.30 p. m.—Session topic: Post-War Foreign Trade Problems, a series of addresses dealing with general foreign trade matters.

Evening session, 8 p. m.—Group sessions.

Group I. Commercial Education for Foreign Trade.

Group II. Foreign Trade Merchandising, in co-operation with the American Exporters' and Importers' Association.

Group III. Financing Foreign Trade, in co-operation with the American Bankers' Association.

Group IV. Advertising for Foreign Trade.

SECOND DAY, FRIDAY, APRIL 25

Morning session, 10 a. m.—Session topic: The American Merchant Marine, in which will be considered American ship-building, provision of cargoes, establishment of trade routes and return cargoes, inland waterways, American and foreign navigation systems and the formation of an American maritime policy.

Afternoon session, 2.30 p. m.—Group sessions.

Group V. Foreign Credits, in co-operation with the National Association of Credit Men.

Group VI. Direct Selling, in co-operation with the American Manufacturers' Export Association.

Group VII. Export Combinations, describing the Webb Law in actual operation.

Group VIII. Ocean Service, in co-operation with the American Steamship Association.

Friday evening, 7 p. m.—Banquet, Congress Hotel.

A number of speakers of national prominence will present several highly important foreign trade subjects.

THIRD DAY, SATURDAY, APRIL 26

Morning session, 10 a. m.—Reports of group sessions, report of general convention committee, miscellaneous business adjournment.

The work of organizing the convention is being handled by O. K. Davis, secretary of the National Foreign Trade Council, 1 Hanover Square, New York. Requests for hotel reservations should be addressed to H. H. Merrick, chairman of the Hotel Committee, Chicago Association of Commerce, 10 South La Salle street, Chicago.

This year the convention has assembled a large amount of valuable technical information, which is available to all delegates who wish to use it. This information will be furnished by the volunteer trade advisors of some of the most experienced business houses and by the representatives of the government trade agencies. A number of prominent business men of long experience in every branch of foreign trade have offered their services as volunteer advisors. The information they can give is based on personal experience, and as such is doubly valuable. In addition, the Department of State will co-operate by assigning to the convention some members of the Consular Service, who will just have returned from Europe, Latin America and the Far East. The Department of Commerce will send

a number of its experts from the Bureau of Foreign and Domestic Commerce. The Shipping Board will be represented. The Pan-American Union will be present to give information on Latin-American relations. These men are thoroughly familiar with their respective fields and can supply a great fund of valuable information if called upon.

CHICAGO COMMITTEE

The Chicago Executive Committee is in charge of all local arrangements. It is composed of the following: John J. Arnold, chairman, vice-president First National Bank; Charles A. Munroe, vice-chairman, Chicago Industrial Club; M. A. Graettinger, secretary, Illinois Bankers' Association; John R. Washburn, treasurer and chairman of Finance Committee, Continental and Commercial National Bank; Harry H. Merrick, chairman of Hotel Committee, president Chicago Association of Commerce; George R. Meyercord, chairman of Publicity Committee, Illinois Manufacturers' Association; H. G. P. Deans, chairman of Entertainment Committee, vice-president Merchants' Loan & Trust Company.

Acting Secretary of State Polk Announces Acceptance of Trans-Siberian Plan

Acting Secretary of State Frank L. Polk on Wednesday announced that the United States Government had now accepted formally the proposal of the Japanese Government for a plan to secure the restoration of railway traffic in Siberia.

"The agreement," said Mr. Polk, "is the result of discussion begun last August, before the signing of the armistice. It has been accepted because it offers an effective means to assist the Russian population of Siberia, which has been suffering for many months from a gradual collapse of railway transportation. Not only have the people lacked many necessities of daily life, such as shoes, clothing and agricultural machinery, but they have been wholly unable to return to their normal occupations of marketing their own considerable stores of dairy products and grain.

"In May, 1917, John F. Stevens was sent to Siberia, and a few months later was followed by the Russian Railway Service Corps, composed of American railway engineers, who were to assist the Russian railway administration, and thus contribute in carrying out the expressed purpose of the United States to aid Russia in tangible form. The arteries of life in Russia, as elsewhere, are the railways. The problems, especially in Siberia, are similar to those in America, where the long haul is almost the rule and certainly not the exception.

"Under the plan of operation which is now to be effected, the Siberian railway system, which includes the Chinese Eastern Railway, is to be supervised by an interallied committee, the chairman of which is to be a Russian. In addition to Russia, Japan and the United States, the countries asked to be represented on the committee are Great Britain, France, Italy and China. The technical and economic management of the railways will be in the hands of the technical board, under the presidency of Mr. Stevens. A military board will co-ordinate matters affecting military transportation arising from the presence in Siberia of military forces of the United States, the Allies, and Russia.

"The purpose of the agreement is to assist the Russians in Siberia in regaining their normal conditions of life and has been reached upon a definite understanding that the railways are to be operated for the interests of the people of Siberia. The United States and Japan have expressly voiced their disinterested purpose not to infringe on any existing rights either of Russia or, where the Chinese Eastern is concerned, of China. The associated governments have been unanimous as to the urgency of the situation.

"The understanding was broached before the conclusion of the armistice, but the problem of aiding the people in Siberia remains the same and has become even more urgent. Russian railway officials have repeatedly urged the assistance of Mr. Stevens and expressed their cordial and special desire that they should be helped. Their co-operation is relied upon as a vital factor for success in assisting their fellow countrymen."

Locomotive Deliveries in January

THE RAILROAD ADMINISTRATOR HAS ISSUED THE FOLLOWING STATEMENT OF LOCOMOTIVES SHIPPED TO ROADS UNDER FEDERAL CONTROL FOR THE MONTH OF JANUARY:

Works	For period January 1 to 4			For week January 5 to 11			For week January 12 to 18			For period January 19 to 25			For period January 26 to 31		
	Road	No.	Type	Road	No.	Type	Road	No.	Type	Road	No.	Type	Road	No.	Type
American	Southern	3	USRA Santa Fe	O. S. L.	10	USRA Mikado	O. S. L.	4	USRA Mikado	C. & O.	7	USRA Mallet	C. & O.	3	USRA Mallet
	U. P.	4	USRA 6-w. Sw.	B. Ry. of C.	5	USRA Santa Fe	B. Ry. of C.	5	USRA Santa Fe	USRA 6-w. Sw.	4	USRA 6-w. Sw.	C. R. I. & P.	2	USRA 6-w. Sw.
	C. & N. W.	3	Mikado	S. A. L.	2	USRA 6-w. Sw.	T. R. R. St. L.	4	USRA 6-w. Sw.	USRA Mikado	3	USRA Mikado	M. & O.	2	USRA 6-w. Sw.
				Union P.	4	USRA 6-w. Sw.	D. M. & N.	7	USRA Santa Fe	USRA Mikado	1	USRA Mikado	Penn. L. W.	1	Santa Fe
Baldwin				B. & A.	5	USRA Santa Fe	Penn. L. W.	1	Santa Fe	USRA 6-w. Sw.	4	USRA 6-w. Sw.	C. & O.	2	USRA 6-w. Sw.
				Chic. & N. W.	3	Mikado	M. & O.	2	USRA 6-w. Sw.	10-w. Sw.	3	10-w. Sw.	C. & E. I.	2	USRA Santa Fe
				Mobile & O.	2	USRA 6-w. Sw.	Ptsb. & W. Va.	2	USRA 6-w. Sw.	Mikado	1	Mikado	C. & V.	2	USRA Santa Fe
							C. & N. W.	1	Mikado				H. V.	1	Mallet
Lima	N. Y. C.	2	USRA Mikado	N. Y. C.	3	USRA Mikado									
Baldwin	C. B. & O.	1	Mikado	G. N.	2	Mikado	Litch. & M.	2	Consol.				B. & O.	8	USRA Mikado
	Ill. Cent.	1	Mikado	A. T. & S. Fe.	4	Mikado	Sou. R. R.	2	Mikado				G. N.	1	Mikado
	A. C. L.	1	Mikado	B. & O.	1	USRA Mikado	Penn. R. R.	2	Mikado				Ill. Cent.	1	Mikado
	L. V.	1	Pacific	C. B. & O.	8	Mikado	B. & O.	8	USRA Mikado				A. T. & S. Fe.	1	Mikado
	Penn. R.	1	Mikado	Phil. & R.	1	Mikado	C. B. & O.	1	USRA Mikado				P. & R.	1	Consol.
	B. & O.	7	USRA Mikado	Phil. & R.	1	Consol.	Phil. & R.	1	Consol.				Penn. R.	1	Mikado
				L. V.	1	Pacific	A. T. & S. Fe.	1	Mikado				R. F. & P.	2	6-w. Sw.
Grand total—190.		10		31				30		23			20		
		12		11				16		17			15		
		24		45				46		40			35		

Grand total—190.

In addition to the above the American Locomotive Company shipped 2 miscellaneous domestic locomotives and completed 59 foreign locomotives; and the Baldwin Locomotive Works shipped 90 miscellaneous domestic locomotives and completed 25 foreign locomotives.

Equipment and Supplies

Locomotive Deliveries

The following new locomotives were shipped to railroads under federal control during the week ended February 1:

Works	Road	Number	Type
American.....	C. & O.....	3	USRA Mallet
	Chic. R. L. & Pac.....	6	USRA 6 W. Sw.
	Mobile & Ohio.....	2	USRA 6 W. Sw.
	Penn. L. W.....	1	Santa Fe
	C. & O.....	3	10 W. Sw.
	Chic. & E. Ill.....	5	USRA Santa Fe
	C. B. & O.....	2	USRA Santa Fe
	Hocking Valley.....	1	Mallet
	Chic. & N'w.....	1	Mikado
	Grand Trunk.....	2	USRA 6 W. Sw.
Total.....		26	
Baldwin.....	B. & O.....	8	USRA Mikado
	Great Northern.....	1	Mikado
	Ill. Cent. R. R.....	2	Mikado
	Atchison, Top. & St. Fe.....	1	Mikado
	Phila. & Reading.....	1	Consols
	Penn. R. R.....	1	Mikado
	Richm. Fbg. & Potom.....	2	6 W. Sw.
	Southern.....	1	Mallet
Total.....		17	
Grand total.....		43	

Freight Cars

CHICAGO, MILWAUKEE & ST. PAUL.—The Bettendorf Company, Bettendorf, Iowa, has received an order from the Chicago, Milwaukee & St. Paul for 1,000 steel center sills for use in the construction of 1,000 40-ton capacity box cars which the St. Paul is planning to build in its Milwaukee shops. The delivery is to be made between February 15 and March 1.

CANADIAN NATIONAL RAILWAYS.—The order for 3,000 freight and 180 passenger cars given in the *Railway Age* of January 31 was shown slightly incorrect. The order is correctly given as follows:

750 box cars
300 stock cars
from the National Steel Car Co.
500 stock cars
150 refrigerator cars
250 ballast cars
from the Canadian Car & Foundry Co.
500 flat cars
550 general service
from the Eastern Car Company.
50 colonist cars from the Pullman Co.
100 colonist
30 baggage
from the Canadian Car & Foundry Co.

Passenger Cars

THE HERSHEY CUBAN RAILWAY advises that it is in the market for a number of light passenger cars for branch line service, either storage battery or gasoline, with a seating capacity of from 30 to 50 passengers. H. L. Hill is manager of the company, with headquarters at Prado 33, Havana, Cuba.

Trade Publications

THREADING MACHINES.—The complete line of threading machines for bolts, nuts and pipe, manufactured by the Greenfield Tap & Die Corporation, Greenfield, Mass., is described and illustrated in Catalogue 41, which also gives the specifications for the machines and detailed information regarding parts for threading machines.

INSLEY DERRICKS.—The Insley Mfg. Company, Indianapolis, Ind., has issued bulletin No. 110 containing 20 pages descriptive of the steel guy and stiffleg derrick manufactured by that company. The booklet is illustrated with wash drawings of complete derricks and various details of them. Tables are also presented, giving principal dimensions and properties of this equipment.

Supply Trade News

Lieut.-Col. R. P. Lamont, division chief of ordnance department, with headquarters at Washington, resumed his duties as president of the American Steel Foundries at Chicago, February 1.

William G. Denney, treasurer of the Standard Truck Car Company, Chicago, died on February 7, at his home in Millerton, N. Y., at the age of 65 years. Mr. Denney had been with the Standard Car Truck Company since its organization.

The Browning Company, Cleveland, Ohio, has reopened a Chicago office in the Peoples Gas building in charge of R. C. Forbes. The Chicago office has been closed for the duration of the war, as the company's entire output was taken over by the government.

The Barber-Greene Company, announces the following appointments: W. A. Buell, sales engineer, formerly conveyor engineer of the Goodyear Tire & Rubber Company; H. W. Cudding, auditor, formerly general auditor of the Lyon Metallic Manufacturing Company.

Fred M. Egolf, who has been associated with the Acme Railway Supply Company and the Acme Steel Goods Company, has been appointed western railway and marine sales representative of the Glidden Company, Cleveland, Ohio, with headquarters in Chicago.

Lieut. W. W. Glosser, of the Production Division of the Air Craft Board, who has been in France for the past year, has been appointed general sales agent of the Madden Company, with headquarters at Chicago. Before entering military service, Lieut. Glosser was sales representative of the P. & M. Company at Cleveland, Ohio.

The Chicago Pneumatic Tool Company, Chicago, has established a branch office at St. Louis, Mo., under the management of H. W. Buker, who succeeds J. D. Corby as district manager of sales. A stock room and service station will be maintained at St. Louis, as well as the district office. Announcement of Mr. Corby's resignation appeared in the *Railway Age* of February 7 (page 376).

P. C. Cady, office manager of the mechanical department of the New York Central at New York, has been appointed assistant secretary of the International Railway Supply Company, New York, which is the purchasing agent for the American Railroad Company of Porto Rico and the Trinidad Government Railways, and also the export department of the Pyle-National Company. His appointment becomes effective February 15. Mr. Cady has been in railroad service since 1893, when he entered the mechanical department of the Lake Shore & Michigan Southern at Cleveland, Ohio.

E. S. Nicholas has been appointed traveling engineer for the American Arch Company, with headquarters at Detroit, Mich. Mr. Nicholas was formerly boilermaker foreman of the Missouri Pacific shop at Kansas City. M. R. Smith has been appointed traveling engineer, with headquarters at St. Louis, Mo. Mr. Smith was formerly master mechanic at Coxton, Pa., on the Lehigh Valley. H. Darby has been appointed traveling engineer of the company, with headquarters at St. Paul, Minn. Mr. Darby was formerly motive power inspector at the Transcona shop, Winnipeg, of the Grand Trunk Pacific. J. D. Brandon has been appointed traveling engineer of the company, with headquarters at Montreal. Mr. Brandon was formerly general foreman at the Brightwood shops, Indianapolis, of the Big Four. E. T. Mulcahy has again assumed his duties as traveling engineer of the American Arch Company after having been honorably discharged from the United States Army. Mr. Mulcahy's headquarters will be at Denver, Col. Before coming with the American Arch Company Mr. Mulcahy was connected with the Union Pacific at its Cheyenne shops.

Financial and Construction

Railway Financial News

BOSTON & MAINE.—A petition has been filed with the Massachusetts Public Service Commission seeking authority to consolidate its leased lines with the company in accordance with reorganization plans agreed upon by a majority of the stockholders. A hearing was set for February 21.

CHICAGO & NORTH WESTERN.—This road has applied to the Public Utilities Commission of Illinois for authority to issue first mortgage gold bonds of 1987 in the aggregate amount of \$1,000,000.

ILLINOIS CENTRAL.—Kuhn, Loeb & Co. are offering at 97½ and interest, to yield about 5¾ per cent, \$16,000,000 15-year 5½ per cent secured gold bonds.

NORTHERN CENTRAL.—The stockholders on February 4, authorized an increase in the company's indebtedness of \$8,216,000. The amount expended, and not yet funded, at the close of 1918, was about \$5,000,000. Allowance is made in the present provisions for future requirements.

OCKLAWAHA VALLEY.—This 50-mile road operating between Ocala, Fla., and Palatka, was sold at public auction on February 3, under an order in chancery on a suit brought by the bondholders. The complainant bought the property for \$225,000 for dismantlement.

SOUTHERN RAILWAY.—See editorial elsewhere in this issue.

Railway Construction

CHICAGO, ROCK ISLAND & PACIFIC.—T. S. Leake & Co., Chicago, have been awarded a contract for the construction of a frame stucco railroad Y. M. C. A. building at Hulbert, Ark. The building will be 80 ft. by 80 ft. and two stories high, costing approximately \$40,000.

The Rock Island has also awarded a contract to the Railroad Water & Coal Handling Company, Chicago, for the construction of a 150-ton coal chute at Ola, Ark., to cost approximately \$10,000.

FRANKFORT & SHELBYVILLE Electric.—Preliminary surveys are now being made to build an electric line from Shelbyville, Ky., to Frankfort, about 22 miles. Two steel bridges, one 150 ft. long and the other 90 ft. long will be required on the proposed line. F. H. Frankland, president and chief engineer, 35 Nassau street, New York City.

ILLINOIS CENTRAL.—The Railroad Water & Coal Handling Company, Chicago, has been awarded a contract for the installation of pumping facilities at Dalton Springs, Ky. The work includes the construction of a pump house and the installation of two 25-hp. oil burning engines, a 100,000-gal. tank and a 10-in. discharge line.

NORTHERN PACIFIC.—Bids for the construction at Brainerd, Minn., of a two-story, reinforced concrete and brick passenger station and office building, 40 ft. by 160 ft., costing approximately \$65,000, are to be received in February or March. It is planned to start work on the building in the spring.

SAND SPRINGS.—This road, which now connects Tulsa, Okla., and Sand Springs, will be extended to Pawhuska within the next year. No contracts for the work have been let as the road expects to complete the extension with its own forces.

BUILDING MILITARY CAMPS.—Stone & Webster, Boston, Mass., have published a 12 in. by 14 in. album of photographs and plans of the cantonments and camps built under the direction of that company during the period of the war. In addition to matter descriptive of the camps there are several large folded inserts containing panoramic views and maps. Floor plans are also given of the buildings occupied by officers and enlisted men.

Railway Officers

Railroad Administration

Central

D. E. Brown, heretofore manager of the Accounting Section of the Division of Public Service and Accounting, has been appointed assistant director of the Division of Accounting.

J. G. Walber, secretary of the Bureau of Information of the Eastern Railroads and a member of Railway Board of Adjustment No. 1, has been appointed labor assistant to the director of the Division of Operation, with office at Washington, D. C.

C. E. Spens has been appointed assistant director, Division of Traffic, in charge of export and import traffic matters, with office at Washington. In addition, Mr. Spens will continue his present duties as manager of inland traffic, United States Food Administration. Mr. Spens was vice-president in charge of traffic of the Chicago, Burlington & Quincy.

George F. Atkins, Jr., heretofore assistant to the director of the Division of Public Service and Accounting, has been appointed assistant to the director of public service, in charge of rates. **E. C. Niles** has been appointed assistant to the director of public service, in charge of service. Mr. Niles also retains his duties and title as manager of the Short Line Section. **Eugene H. Lamb** has been appointed acting chief of the Bureau for Suggestions and Complaints. This bureau will report to the assistant to the director of public service, in charge of service.

Regional

E. H. Banker has been appointed executive assistant to **H. A. Worcester**, district director of the Ohio-Indiana district of the Eastern region, to succeed **Hugh McVeagh**, who has been appointed assistant to **E. M. Costin**, federal manager of the Cleveland, Cincinnati, Chicago & St. Louis; the Cincinnati Northern; the Central Indiana; the Detroit, Toledo & Ironton; the Central Union Depot, and the Cincinnati, Indianapolis Union. Mr. McVeagh's headquarters will be in Cincinnati, Ohio.

Federal and General Managers

The jurisdiction of **George W. Stevens**, federal manager of the Chesapeake & Ohio; the Ashland Coal & Iron; the Sandy Valley & Elkhorn, and the Long Fork Railroad, has been extended over the Chesapeake & Ohio Railroad of Indiana, which road has been released from the jurisdiction of **E. M. Costin**, federal manager.

Operating

A. C. Hartley has been appointed supervising safety agent of the Michigan Central; the Chicago, Kalamazoo & Saginaw and the Detroit Terminal Railroad, with headquarters at Detroit, Mich.

D. O'Connell has been appointed chief special agent of the Southern Pacific, the Western Pacific, the Tidewater Southern and the Deep Creek, with headquarters at San Francisco, Cal., to succeed **P. J. Kindelon**, deceased.

T. R. McCampbell has been appointed supervising safety agent, with headquarters at Indianapolis, Ind. of the Cleveland, Cincinnati, Chicago & St. Louis and other roads under the jurisdiction of **E. M. Costin**, federal manager.

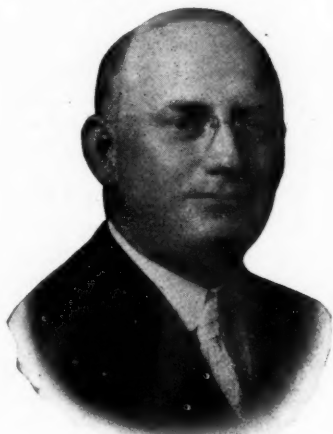
W. D. Baker, federal auditor of the Norfolk & Portsmouth Belt Line, at Norfolk, Va., has been appointed assistant to the federal manager of the Virginian Railroad; the Norfolk & Portsmouth Belt Line; the Norfolk Terminal Railroad, and the Hampton Roads Rail Terminals.

A. D. Rosecrans, trainmaster of the Arizona Eastern, has been appointed acting superintendent of the Globe division, with office at Globe, Ariz., vice **J. W. Williams**, resigned;

H. Weitzel, master mechanic, at Phoenix, has been appointed trainmaster, with office at Globe, vice Mr. Rosecrans.

J. B. Stewart, general superintendent of the Bangor & Aroostook and the Van Buren Bridge, with office at Bangor, Maine, has resigned to go to another position and **W. K. Hallett**, superintendent, succeeds Mr. Stewart as general superintendent; **F. A. Andrews**, trainmaster at Millinocket, has been appointed superintendent of the Southern division; both with offices at Bangor. **George W. Mayo** succeeds Mr. Andrews.

Charles A. Plumly, whose appointment as superintendent of telegraph of the Baltimore & Ohio, with office at Baltimore, Md., has already been announced in these columns,



C. A. Plumly

was born on October 15, 1876, at Big Run, Ohio, and was educated in the elementary schools. He learned telegraphy in the office of his father who was agent and operator at Stewart, Ohio, and in November, 1887, he began railway work on the Baltimore & Ohio Southwestern, serving as an extra operator during week ends and summer vacations. In June, 1903, he was appointed train dispatcher at Chillicothe, and in September, 1907, was made chief dispatcher at the same place. On July 31, 1910, he was appointed division operator at Cincinnati, Ohio, and in March, 1912, became trainmaster at Seymour, Ind. In January, 1913, he was appointed assistant superintendent of telegraph, at Cincinnati, and the following June became assistant to the general superintendent at the same place. On January 1, 1914, he was appointed inspector of transportation at Cincinnati, and since September, 1914, served as assistant superintendent of telegraph, at Baltimore, until his recent appointment as superintendent of telegraph of the Baltimore & Ohio, eastern lines; the Coal & Coke; the Wheeling Terminal Railroad; the Western Maryland; the Cumberland Valley, and the Cumberland & Pennsylvania.

Financial, Legal and Accounting

T. L. Shelton, auditor of station accounts of the Southern Railroad, has been appointed assistant auditor of the Southern Railroad and other roads the accounts of which are audited in the Washington office, in charge of government transportation accounts, and **T. H. Seay** succeeds Mr. Shelton, both with offices at Washington, D. C.

W. G. Sims has been appointed auditor, and **D. F. Callahan** has been appointed federal treasurer, of the Wichita Union Terminal, with headquarters at Wichita, Kan. The jurisdiction of **L. J. Hensley**, federal auditor of roads under the jurisdiction of **J. A. Edson**, has also been extended over the Wichita Union Terminal.

J. A. Robinson, assistant auditor of the Southern Railroad, and temporarily assigned as auditor of its subsidiary railroads, with office at Atlanta, Ga., has resigned to accept service elsewhere, and the jurisdiction of **H. W. Oliver**, auditor of the Georgia Southern & Florida Railroad, has been extended over operating accounts of the Blue Ridge Railroad; the Tallulah Falls Railroad; the Danville & Western; the Hartwell Railroad, and the Lawrenceville Branch Railroad, with office at Atlanta, Ga.

Traffic

E. L. Whitney, chief clerk to the resident traffic assistant of the Eastern region at Chicago, has been appointed division

freight agent of the New York Central, with the same headquarters, succeeding **James L. Clark**, deceased.

F. R. Dalzell, assistant general freight agent of the Gulf, Colorado & Santa Fe, with office at Galveston, Tex., has been appointed general freight agent of the Gulf, Colorado & Santa Fe, the Texas Midland and the Houston Belt & Terminal Railroad, with headquarters at Galveston, Tex.

Engineering and Rolling Stock

J. L. Starkie has been appointed assistant chief engineer, with headquarters at Dallas, Tex., of the Gulf, Colorado & Santa Fe, and other roads under the jurisdiction of **J. S. Pyeatt**, federal manager at Dallas.

W. S. Wilson, supervisor of subdivision No. 12, Pittsburgh division of the Pennsylvania Railroad, at Trafford, Pa., has been appointed division engineer of the Allegheny division, with office at Oil City, Pa., succeeding **C. M. Wisman**, who has been granted a furlough; **C. W. Montgomery**, supervisor at Gallitzen, has been transferred as supervisor to Altoona Yards, succeeding **J. M. Kinkead**, promoted; **W. S. Johns, Jr.**, supervisor at Bowie, Md., has been transferred as supervisor to Trafford, succeeding Mr. Wilson; **F. H. Bently**, supervisor at Titusville, Pa., has been transferred as supervisor to Gallitzen, succeeding Mr. Montgomery; **C. F. Miller**, assistant supervisor, succeeds Mr. Bently, and **T. M. Woodward**, supervisor in the office of the division engineer, Philadelphia division, at Philadelphia, has been appointed supervisor, with office at Bowie, Md., succeeding Mr. Johns.

Corporate Traffic

Henry Hilare Melanson, who has been appointed passenger traffic manager of the Canadian National Railways, with headquarters at Toronto, Ont., as has already been announced



H. H. Melanson

in these columns, was born on March 9, 1872, at Scoudouc, N. B., and was educated at the public schools and St. Joseph's University. He began railway work in November, 1889, with the Intercolonial as a clerk in the mechanical department at Moncton. In August, 1892, he was transferred to the general passenger agent's office and subsequently served as chief clerk in the same office. He was appointed general baggage agent in 1901 and in 1909 became assistant general passenger agent. In August, 1913, he was promoted to general passenger agent and since June, 1917, was passenger traffic manager until his recent appointment as passenger traffic manager of the Canadian National Railway System as above noted.

Operating

H. C. Riddle has been promoted to trainmaster of the Montana, Wyoming & Southern, with office at Belfry, Mont., succeeding **W. E. Ogden**, resigned.

Andrew McCulloch, chief engineer of the Kettle Valley, has been appointed acting general superintendent, with offices in Penticton, B. C., to succeed **J. W. Mulhern**, resigned.

R. Wilson, auditor of the Pacific Great Eastern, with headquarters at Vancouver, B. C., has been appointed acting manager to succeed **G. L. Courtney**. Mr. Wilson's office will be in Victoria, B. C.

The Canadian National Railways have made the following appointments in addition to those previously announced: **D. R. Campbell**, assistant general manager of the Pacific district of the Canadian Northern, with headquarters at Vancouver, B. C., has been appointed general superintendent of the Pacific district, Canadian National, with offices at Vancouver, B. C. **W. T. Moodie**, division engineer at Winnipeg, Man., on the Canadian Northern, has been appointed superintendent of Division No. 1, Central district, Canadian National, to succeed **J. E. Nelson**, who has been appointed superintendent of the Pacific district, Canadian National, with headquarters at Kamloops Junction, B. C. **W. I. Munro**, chief despatcher on the Canadian Northern at Winnipeg, Man., has been appointed acting superintendent of Division No. 2 on the Prairie district of the Canadian National, to succeed **T. J. Brown**, assigned to other duties.

Engineering and Rolling Stock

A. M. Bouillon, resident engineer on the Grand Trunk Pacific, at Regina, Sask., has been appointed assistant engineer, with headquarters at Prince George, B. C.

Andrew McCowan, supervisor of car works of the Canadian Northern system at Winnipeg, Man., was appointed master car builder of the Canadian National Railways, western lines, with the same headquarters, at the time of the recent assimilation of the former road by the latter. Mr. McCowan was born at Perth, Scotland, on December 5, 1867, and was first employed by the Perthshire Carriage Works (Scotland), as an apprentice car builder, between 1881 and 1887. He began his railroad experience in May, 1888, as a carpenter on the Canadian Pacific at Montreal, Que. In March, 1890, he was promoted to car foreman, and seven years later he was appointed shop foreman at Farnham, Que. From September, 1903, to April, 1910, he was car foreman at Cranbrook, B. C., and on the latter date left the Canadian Pacific to become general car foreman of the Canadian Northern at Winnipeg, Man. He was promoted to supervisor of car works, western lines, in September, 1915, and in May, 1916, had his jurisdiction extended over the entire system.



A. McCowan

The following appointments were recently made on the Canadian National Railways: **Thomas Turnbull**, assistant chief engineer of the Canadian Northern, has been appointed engineer maintenance of way of the Canadian National, western lines, with headquarters at Winnipeg, Man. **A. V. Redmond**, division engineer of the Transcontinental division, Canadian Government Railways at Cochrane, Ont., has been appointed district engineer of the Central district, Canadian National, with headquarters at Winnipeg, Man. **H. L. Vercoe**, special engineer at Winnipeg, Man., on the Canadian Northern, has been appointed district engineer, Prairie district, Canadian National, with offices at Saskatoon, Sask. **T. W. White**, assistant engineer in the bridge engineer's office of the Canadian Northern at Winnipeg, Man., has been appointed district engineer of the Western district, Canadian National, with headquarters at Edmonton, Alta. **R. M. Mitchell**, right of way agent of the Canadian Northern, has been appointed right of way agent of the Canadian National, western lines, with headquarters at Winnipeg, Man. **H. G. Reid**, assistant superintendent of rolling stock Canadian Government Railways at Transcona, Minn., has been appointed general master mechanic Canadian National, western lines, with offices at Winnipeg, Man. **H. A. English**, master me-

chanic, Central district of the Canadian Northern, has been appointed master mechanic of the Central district of the Canadian National, at Winnipeg, Man. **L. G. Roblin**, general master mechanic, Canadian Government Railways, western lines, with offices at Cochrane, Ont., has been appointed master mechanic of the Prairie district, Canadian National, with offices at Saskatoon, Sask. **T. J. Lowe**, fuel agent, Canadian Northern, western lines, has been appointed fuel agent, Canadian National, western lines, with headquarters at Winnipeg, Man. **J. A. Sutton**, fuel and tie agent, Transcontinental division of the Canadian Government Railways, has been appointed district fuel agent of Divisions No. 1 and 2 of the Central district, Canadian National, western lines, with headquarters at Cochrane, Ont.

Obituary

Walter T. Aylesbury, formerly superintendent of car service of the Terminal Railroad Association of St. Louis, died at Bartlesville, Okla., on February 4, after an illness of two months. Mr. Aylesbury was long associated with the Chicago, Burlington & Quincy and was in the employ of the Terminal Railroad Association for 16 years, terminating his connection with that road in 1918.

Lieut.-Col. Hiram J. Slifer, commander of the 21st regiment of railway engineers, American Expeditionary Forces, died in France on February 3, of pneumonia, and was buried on February 5, at Sorcy, Meuse. Lieut.-Col. Slifer was born in 1857, and, after graduating from the Polytechnic College of Pennsylvania, entered the employ of the Mexican National Construction Company. Subsequently he was assistant engineer of the Philadelphia division of the Pennsylvania, principal assistant engineer of the Milwaukee, Lake Shore & Western, division engineer on the Chicago & North Western, superintendent of the Iowa division of the same road at Boone, Iowa,



Lieut.-Col. H. J. Slifer

general superintendent of the Eastern district and later the Central district of the Chicago, Rock Island & Pacific, railway expert and business manager of the construction department of J. G. White & Co., at New York, general manager and assistant to the president of the Panama Railroad & Steamship Lines at Colon, Panama, and general manager of the Chicago Great Western at Chicago. In 1912 he became a consulting civil engineer, specializing in railroad practice, with headquarters at Chicago. His death was due indirectly to a railway accident in France. A gas motor inspection car on which he was riding to inspect road beds which the Germans had mined and blown up, jumped the track near Buzancy, throwing Lieut.-Col. Slifer down an eight-ft. embankment and into a small stream. He was carried to a nearby field hospital, and then was transferred to a base hospital at Neufchateau where he suffered an attack of bronchial pneumonia. He was later sent to a convalescent camp at Cannes. In a letter to a friend he stated that he intended to rejoin his regiment on January 16, at Conflans. Until the announcement of his death by the Adjutant General at Washington, no further information concerning the colonel's condition had been received. He enlisted in August, 1917, as a major in the Twenty-first Engineers (Light Railways) and was commissioned lieutenant-colonel in October, 1917, sailing for France in December of the same year.